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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
Poor Old England
Fish or Cut Bait
'Cures' Often Kill
Who Wants to Live Like an Ant? Or, Will You Become a Rabbit?
Here's the Kernel of the Corn
Let's Hear Both Sides And TELL Both Sides

Story of the Week

"To Europe's hungry Reds who cry that Capitalism is a failure, we must be pardoned for not replying. It isn't polite to talk back with the mouth full."—H. V. WADE

(Continued from last week)

Poor Old England

Socialism and Communism are to government what bankruptcy is to business. When either a nation or a business goes broke, a receiver takes over its affairs. Socialism is a form of receivership. It's an admission that the people of a nation no longer are competent to manage their own affairs.

Let's take "poor old England" as an example. In that dolorous but still proud principality, some 50,000,000 rugged individualists are trying to survive on a small island which can support only a third of its daily eaters. Up until recently, England's export trade, the exploitation of its colonies, and returns on investments abroad made up the difference—and handsomely. But wars and "social planning" have washed out England's capital, damaged her export trade, and loosened colonial ties.

Today, England faces an ugly fact: she is overpopulated. So is most of Europe and Asia—despite the decimations of wars, famines, and epidemics.

Too many couples are breeding too many offspring. That's the root problem of this Uneasy Age. (Malthus stated this problem a century ago. He thought that recurrent wars would balance the books. But human reproduction is outstripping even modern science's contributions to the art of mass slaughter.)

This dilemma—too many mouths to feed—can be resolved only through birth control or mass migration.

Neither of these rational solutions to the problem of overpopulation pressure will be adopted during our lifetime. Racial customs, religious shibboleths, indolent habit, loyalty to the familiar, and tribal *mores* will insure a continuing ascent of the birth-rate curve.

When a nation breeds more people than it can feed, when its avocation is procreation rather than product creation, eventually it teeters on the verge of bankruptcy—and totters into Socialism—like England.

"It seems like a good idea at the time" . . . but:

Embracing Socialism doesn't solve their problem, either. Their only hope of survival is to lift themselves by their bootstraps through working harder and producing more goods than they ever have before.

To eat, England must export. She must trade coal and manufactured goods for food. But Socialism impairs labor productivity. This has been proven over and over again—and lately in England.

Wherever and whenever a Labor Party wins an election, its members take life easy.

"We're in the saddle now," they seem to reason, "so we'll loaf on the job. Who's going to stop us?"

Fish or Cut Bait

The leap in American standards of living during the last century occurred partly because business men could save enough out of earnings to buy

(Concluded on Page 6, Column 1)

Coolerator Shows New Model In 7¾ Cu. Ft. Size

DULUTH, Minn.—Claimed to give maximum storage capacity in a cabinet requiring a minimum of kitchen space, the DR-77 "Kitchen Saver" electric refrigerator has been introduced by the Coolerator Co.

The refrigerator contains 7¾ cu. ft., including a 25-lb. frozen food locker, and has 15.7 sq. ft. of shelf area. Outside dimensions are 28 in. wide, 25 in. deep, and 56¾ in. high. Inside measurements are 21⅞ in. wide, 17½ in. deep, 39$^{11}/_{32}$ in. high.

List price is $239.75, f.o.b. Duluth.

General storage volume of the box is 6.68 cu. ft., while the frozen food compartment holds 1.07 cu. ft. of space. The three ice trays have a capacity of 6 lbs. (42 cubes), and the full-width vegetable crisper is of 20-qt. capacity.

There are three full-width shelves and one narrow shelf, but the ar-

(Concluded on Page 4, Column 4)

Republic Steel's President Sees Little Gain In '48

CLEVELAND—National steel production cannot increase by much more than a million tons in 1948 even though steel capacity in 1947 and 1948 will have been increased by 2,500,000 tons of ingots and 3,000,000 tons of sheet and strip, C. M. White, president, Republic Steel Corp., told members of the Pressed Metal Institute, Cleveland District, meeting here last week.

White warned that those who advocate vast expansion of the nation's steel industry have no appreciation of the situation in raw materials and scrap which the industry is facing today.

"I doubt whether the people of this country really understand the magnitude of the steel industry," White said. "It is doubtful if they realize that the raw materials used in our steel plants alone each day require a train load of material 133 miles long. This is not per year. This is per day.

"Talk of adding 10% or a 13-mile train load of raw materials per day simply means that the people who make these statements do not understand the basic facts. They likewise do not understand the fact that the cost of providing this additional capacity is three or four times what it was at the time the bulk of our steel capacity was built and that consequently due to these high costs of additional capacity the selling price

(Concluded on Back Page, Column 4)

Urges Home Laundry Sale on 10-Yr. Terms

SOUTH BEND, Ind.—Distributors of Bendix Home Appliances, Inc., are being urged to promote unit sales including the Bendix automatic washer, dryer, and ironer under the recently-liberalized credit terms. In letters signed by Grant Layng, sales manager of the builders division, it was pointed out that:

"Veterans are now able to finance Bendix equipment as part of a home modernization, provided the total sum does not exceed 1,000. The terms of the loan are for 10 years on a 3% discount basis. The Veterans Administration will insure against loss any type of lending institution up to 15% of the total amount of the loans made.

"We also understand that recent legislation now permits federal savings and loan association to make unsecured loans up to $1,500 for home modernization."

Nema Sept. Household Sales Total 290,082

NEW YORK CITY—World sales of household electric refrigerators by the 11 manufacturers who report their sales to the Household Refrigeration Section of Nema totaled 290,082 units, a substantial increase over the 213,901 units reported in August.

Total world sales by these manufacturers hit 2,258,874 for the first nine months of 1947.

The 7-cu. ft. size was still predominant by far in September sales, but the 8-cu. ft. size was the second most popular by a margin considerably greater than its average over the other sizes for the nine months.

Gov't Official Tells 'Portal-to-Portal' Effect on Repairmen

WASHINGTON, D. C.—What effect the Portal-to-Portal Act which became law last May has on the Fair Labor Standards Act (Wages & Hours), has been outlined to considerable extent in a general statement issued by William R. McComb, national administrator of the Department of Labor's Wage and Hour Division.

No specific reference is made in the statement to refrigeration contractors, but repairmen in general are touched upon in one section of the lengthy statement, which serves as a guide only, since any final decisions must be made by the courts.

The Portal-to-Portal Act, of course, prohibits payment to workmen for time spent in "walking, riding, or traveling" to or from their place of work, and likewise generally prohibits payments for "preliminary" or "postliminary" activities in connection with their jobs.

Travel during the employe's regular working hours, however, is covered.

"For example," states McComb, "travel by a repairman from one place where he performs repair work to another such place, or travel by a messenger delivering messages is not the kind of 'walking, riding, or traveling'" which the Portal-to-

(Concluded on Page 11, Column 1)

Next Locker Plant Meeting In Chicago In October, 1948

OMAHA, Neb.—The 1948 annual refrigerated locker plant industry convention will be held in Chicago the week of Oct. 24, 1948, it was announced following a meeting last month of the board of directors of the Frozen Food Locker Institute.

While detailed plans for the 1948 convention are not complete, headquarters for the convention will probably be at the Sherman hotel, and the three-day conclave will likely start on Tuesday, Oct. 26.

At the meeting of the Institute's directors, principal subject under discussion was the matter of locker plant financing. The Finance Committee was directed to have a report ready for the membership at the Spring meeting of the membership to be held March 19 and 20 at Edgewater Beach hotel in Chicago, at which time financial experts will offer their views on breaking the financing deadlock that exists for locker plants in many parts of the country.

New G-E 2-Door Two-Temp Model Lists at $399.75

BRIDGEPORT, Conn.—A new two-door 8-cu. ft. refrigerator that will be promoted as "taking care of any household refrigeration problem, from freezing foods to holding butter at a smooth spreading temperature," and which is claimed to eliminate defrosting and covering of fresh foods, has been introduced by General Electric Co.

It will be known as the NH-8 "combination" refrigerator. According to L. H. Miller, manager of the G-E household refrigerator division, distribution is now being made for December delivery to the public. Recommended national retail price is $399.75.

A combination refrigerator and home freezer, the new unit has two separately refrigerated, completely insulated compartments, each with its own door and its own control.

The upper compartment, which is 1.5 cu. ft. in volume, maintains 0° F. for freezing of foods and storage of frozen foods.

The lower compartment is 6.7 cu. ft. and maintains about 38° F. for normal fresh food storage.

G-E will base its promotion arguments for the need of complete separation of the two compartments along the following lines:

"When a zero-degree compartment is provided in a refrigerator, it must not be exposed each time the fresh-food section is opened. Otherwise the freezing compartment will frost rapidly and be subjected to fluctuating temperatures which are detrimental to the frozen foods.

"The importance of this precaution is apparent when it is appreciated that in many instances the housewife reaches into her refrigerator for fresh foods as many as 80 times a

(Concluded on Page 10, Column 3)

ASME Code Clauses On Pressure Vessels Could Hit Industry

NEW YORK CITY—Two clauses in the new proposed ASME Code Section 8 for Unfired Pressure Vessels may draw fire from manufacturers in the refrigeration industry, it was indicated following a meeting on the code here.

Attention of builders of refrigeration pressure vessels is drawn to Paragraph UW-52 (page 82) and Paragraph UW-10 (b) (page 69).

Par. UW-52 requires that all vessels over 6 in. i.d. and 15 p.s.i. working pressure have spot examination of welds either by spot X-ray or trepanning. The latter is the cutting out of a plug about 2 in. in diameter to permit examination of the weld metal.

Par. UW-10 (b) requires the entire vessel to the furnace stress-relieved if the tube sheet or other welded portion exceeds 1¼ in. thick.

Many small condensers used in the

(Concluded on Back Page, Column 3)

Chattanooga Sales of Refrigerators Up 25%

CHATTANOOGA, Tenn. — Though sales of most major appliances here dipped during October from September levels, refrigerators, dishwashers and sink combinations, and clothes dryers showed strong gains, a report issued by the Electric Power Board of Chattanooga revealed.

In the commercial field, sales of freezing cabinets, beverage coolers, and milk coolers gained, while air conditioning unit sales, commercial

(Concluded on Page 4, Column 4)

Credit Control Return Seen, But For How Long?

Senate Group Favorable For Controls to March '49; Fight Looms In House

WASHINGTON, D. C.—A temporary revival of controls over instalment buying was expected to be recommended soon by the Senate Banking Committee as the group prepared to meet Dec. 1 to consider pending legislation on the matter.

But it was uncertain how long the committee will want controls to run. And there seemed to be some question as to whether the House might approve.

Senator Buck has presented a bill to restore the Federal Reserve Board's power over consumer credit through next June. The committee delayed action on this proposal until the Dec. 1 meeting.

Senator Charles W. Tobey, committee chairman, indicated his group will approve renewal of credit curbs. However, he suggested that controls be extended to March, 1949.

A request by the Federal Reserve Board for power to restrict instalment buying permanently—or for at least three years—did not impress the committee. One committee member said the group definitely will not approve permanent controls and Sen. Tobey said a three-year authority would be excessive.

Sen. Tobey said the hearings were being speeded along because "if controls are to go back on we should act as soon as possible." He said this was necessary in order to keep as narrow as possible the period of heavy instalment buying against any anticipated re-establishment of controls.

About the same time, the House Banking and Currency Committee heard a plea for revival of controls over instalment buying from Secretary of the Treasury Snyder.

"The most effective types of credit controls are those which strike at individual forms of credit extension which are contributing to inflationary pressures," the secretary declared. "The most important single form of such credit extension at the present time is in consumer credit."

Meanwhile, a representative of the electrical appliance industry hinted that manufacturers may make a unified protest to the Government against renewal of credit curbs. He said producers will not accept revival of controls in silence or do they consider such action inevitable.

"Manufacturers of electrical appliances strongly favored repeal of Regulation W when it was in force and there is no reason to believe that they now are in favor of reimposition of consumer credit controls which would apply to appliances," he pointed out.

While conceding that the Senate Banking Committee undoubtedly will recommend renewed controls, the represenative declared that the House Banking Committee is not yet so inclined. He listed these reasons why credit controls should not be reinstated:

1. Injecting large down payments or high full cash payments into the already swollen money supply of the nation contributes more to inflation than do time purchases of appliances.
2. Time payment regulation is discriminatory because upper income groups with enough money for cash payments are not controlled in any way.
3. Instalment selling is vital in keeping appliance manufacturing on a mass production basis.

One of the many other protests against reinstitution of credit curbs came from Kenton R. Cravens, president of the American Bankers Asso-

(Concluded on Back Page, Column 1)

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Bi-Weekly Cleaning, Slip Covers, Using Lids Cut Refrigeration Cost

ST. LOUIS—Thousands of retail grocers are wasting at least one third of the operating cost for food-selling refrigeration, says Gus Bahr, owner of the Munn Market in suburban St. Louis.

The Munn store recently made a survey of self-service refrigerated cases, standard display cases, and a produce refrigerator, with an eye toward cutting down its bill for electric service. The results, after making a few inexpensive changes, have been reducing refrigeration costs by 33⅓%, plus far better satisfaction to customers.

The first economy step was a study of open self-service refrigerators for frozen foods, meats, and dairy products. Thick incrustation of ice, it was found, was causing extra running time. This has been solved by regular cleaning of all self-service refrigerators twice a week, instead of once, chipping away all blankets of ice.

Second, a four-compartment produce refrigerator, it was found, ran almost continuously. This problem was solved by installing simple lift-up glass doors, which are kept in place over displayed produce through the week, and removed on Saturdays, when business is heavy.

Success with the glass lids moved Bahr to order canvas slip-on covers, which exactly fit self-service refrigerated cases. As soon as the store closes, these are slipped over the open cases, "sealing in" the refrigerated atmosphere until the following morning.

Free Ice Cubes, Loan of Portable Ice Box Boost Volume In Packaged Liquor Store

DEVON, Conn.—An ordinary home freezer, installed in Harold's Package Store, retail liquor store here, has become the basis of a highly profitable merchandising program.

Harold Watkins, owner of the store, thinks that the home freezer has been one of the most valuable additions he could make to package liquor retailing. He uses it in many ways, for rapid cooling of beer and mixers in warm weather, chilling of wines, etc., where the customer asks for "while you wait" service.

Most interesting use of the home freezer, however, has been in maintaining a "free ice cube service." This is advertised by signs on the display windows and by the letters "Ice Cube Service" in black on the white face of the home freezer. Whenever a customer comes in to order liquors of any kind, the salespeople ask whether the customer has enough ice cubes, and if not, supply ice cubes free, in any amount the customer asks for.

For convenient carryout, the store packages up grocery-store paper bags containing 80 cubes each, and gives out anywhere from 5 to 10 per day, and as many as 20 on Saturdays.

As fast as a sack of ice cubes is delivered another sack is filled up from the convenient trays in the freezer. Several times a day, as rapidly as the freezer produces the ice cubes, they are removed and sacked. Sacks of ice cubes stay neat, and easy to handle when placed in the freezer section of the unit, and customers can always depend upon finding a bag of ice cubes available.

While there is no tangible means of estimating how many new customers have been brought in by free ice cube service, Watkins believes that scores of his regular purchasers were attracted in this way. Incidentally, ice cube service led to still another service which has won a lot of goodwill. This is a stock of insulated metal "portable iceboxes," ideal for the customer who wants to ice a little beer, keep mixers or ice cubes for an all-day outing, a trip to the mountains, or a fishing trip.

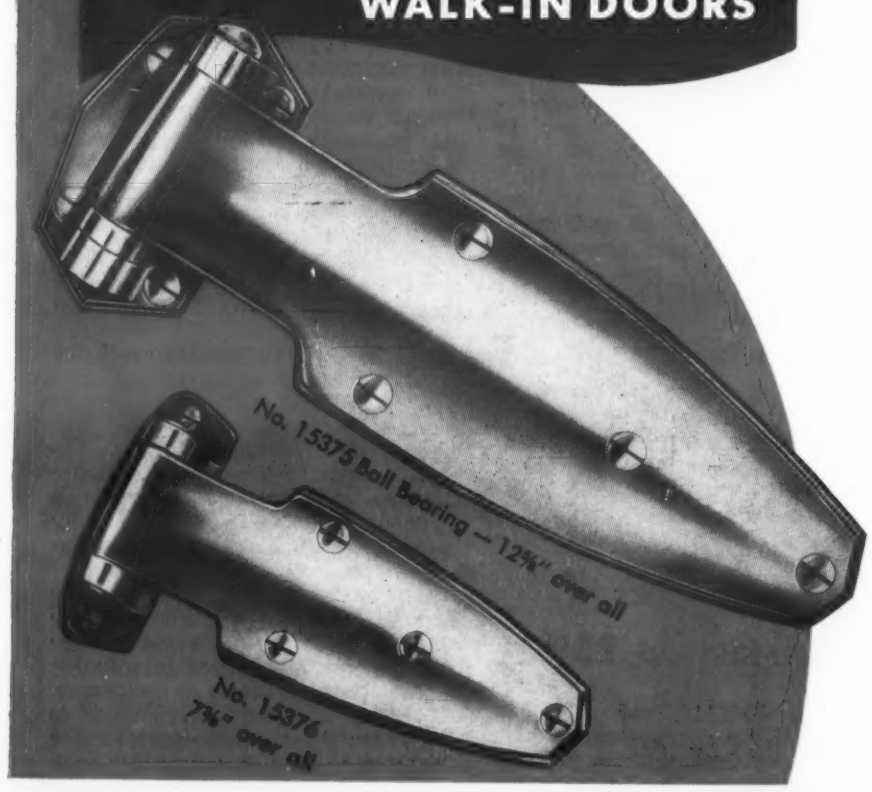
A dozen of these portable iceboxes are kept on hand, lettered with the name in white, and are suggested to the customer who wants to serve drinks somewhere where ordinary refrigeration is not available. For releasing the iceboxes, Watkins makes a charge of $7 deposit, enough to cover the cost of each unit if it is lost, and the rental is free. To date, after several months of operation, no customer has failed to return the iceboxes, and it is a remarkable feature that most customers have increased their purchases greatly.

In addition to the home freezer, the store has a four-compartment, reach-in refrigerator in which canned beer, bottled beer, and wines are kept always chilled to the proper temperature. The refrigerator has three different temperatures in three compartments, and thus the store can offer correctly refrigerated drinks at all times.

WHEN THEY TRIP—THEY GRIP

This is the "coming-out party" for our new walk-in Lock No. 4778, shown at the right. A little smaller than No. 4774, but it's a real powerhouse — perfect for a great many walk-in jobs, including the "personal" type. And it SAVES almost half the cost of some larger models.

Living Action
. THAT'S THE WAY TO "HANDLE"
WALK-IN DOORS



And when you say "Living Action", you mean locks by Grand Rapids Brass! This exclusive automatic locking principle gives positive closing . . . seals the cold in . . . operates at the touch of a finger, even on the heaviest doors.

Engineered for a lifetime of rough-house commercial abuse. What's more, it's the handsomest hardware on the market . . . with its clean lines and mirror-smooth chrome.

A padlock bail provides positive, theft-proof protection for any door on which these locks are installed. Our No. 4552 Push Rod (not shown) fits both locks with an interior safety release.

Available from your jobber. Or write us TODAY for full specifications and installation data.

Grand Rapids Brass Company
Division of CRAMPTON MANUFACTURING COMPANY
Grand Rapids 4, Michigan

October Retail Sales Top Previous Month's by 8%

WASHINGTON, D. C. — October retail sales were up 8% over September sales and registered a 7% gain over the corresponding month of last year, according to the Department of Commerce.

All but three of the 13 groups of retail outlets surveyed showed increases over October, 1946. Lumber and building materials dealers led the list with a 37% gain. Eating and drinking places, apparel stores, and jewelry stores showed sales decreases.

American Refrigerator Names Rogers Distributor

MINNEAPOLIS — Charles R. Rogers of Modern Appliance Co., San Mateo, Calif., has been appointed exclusive distributor of American Refrigerator & Machine, Inc. products in that state, R. B. Hartman, American sales manager, has announced.

American products will be handled from warehouses in both Los Angeles and San Francisco in order to serve the California trade more easily.

McCall Employes Accept 8-Cent Raise To End Strike

HUDSON, N. Y.—Union employes of the McCall Refrigerator Corp. have accepted an eight-cent hourly pay increase ending a four-week old strike.

Settlement of the wage dispute came at a conference between corporation officials and United Electrical Workers representatives.

Ace Cabinet Corp. Introduces Stainless Steel Shell Line

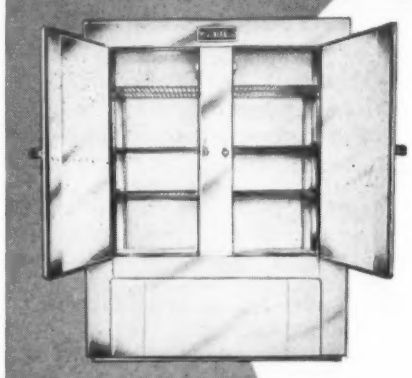
NEW BEDFORD, Mass.—The addition of a complete line of stainless steel shells to their present line has been announced by the Ace Cabinet Corp. here.

The company's ice cream cabinets, farm and home freezers and frozen food display cabinets will all be available in the new stainless steel shell.

Surfas Company Plans Addition

LOS ANGELES—Building permit has been issued for construction of an addition to the store building of the Surfas Refrigeration Co. at 4014 West Jefferson Blvd., Los Angeles, to cover an area of 40 x 40 ft. and to cost $6,000.

THE FINEST REFRIGERATORS
ARE MADE OF STAINLESS STEEL
DEPENDABLE—ECONOMICAL—DURABLE



Our PERFECTED Stainless Steel Reach-In Refrigerators are built for LIFETIME SERVICE and operate at minimum cost.

We Also Manufacture:
• DRY BEVERAGE COOLERS
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• FREEZERS
• DISPLAY CASES
• ICE CREAM CABINETS

IMMEDIATE DELIVERY
ALL EQUIPMENT GUARANTEED

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678 BROADWAY NEW YORK 12, N. Y.

Five Questions that could have but One Answer

(A thirty-second Quiz about your business future)

1. When you think of protection from overcrowding of dealers in your market, what appliance manufacturer comes first to your mind?

ANSWER:..... of course!

2. What manufacturer can you count upon in the future, as in the past, to bring you products with extra, sales-making value . . . offering you an exceptional sales opportunity?

ANSWER:..... of course!

3. What manufacturer can you count on to continue giving you products of unequalled dependability...and all the advantages this means both for your customers and you?

ANSWER:..... of course!

4. What manufacturer can you rely on most surely to maintain competitive prices...so essential in building your business in the future?

ANSWER:..... of course!

5. What manufacturer has given the utmost promotional and training assistance, basing its whole approach on the conviction that its success is closely linked with yours...a manufacturer with whom you can look ahead confidently to 1948 and beyond?

ANSWER:..... of course!

1. Protection from overcrowded dealerships

2. Plus values in product step-up features, engineering "firsts"

3. Unequalled service record

4. Highly competitive pricing

5. Forceful assistance in advertising, sales promotion and sales training.

Kelvinator — of Course!

It's Kelvinator, of course, that gives you an unbeatable combination of *Retail-Minded* merchandising policies. And you can look to Kelvinator for the continued extension and aggressive development of these policies to help you achieve the fullest measure of success as an appliance retailer. ★ ★ Look for big new things to start happening soon to bring even greater opportunities with Kelvinator this coming year! ★ ★ More than ever the Kelvinator franchise will be the most valuable in the industry!

You build a future with RETAIL-MINDED Kelvinator

THE MOST VALUABLE FRANCHISE IN THE APPLIANCE INDUSTRY

DIVISION OF NASH-KELVINATOR CORPORATION · DETROIT 32, MICHIGAN

A MESSAGE TO MANAGEMENT

WM. HENRY KNOWLTON

formerly on the editorial staff of Air Conditioning & Refrigeration News is associated with our organization in the creation of promotional and training programs.

Mr. Knowlton's wide experience in refrigeration and air conditioning will be available to a limited number of clients during the coming year.

Inquiries regarding sound motion pictures, sound slidefilms, chart presentations, Visualcast slides, and other visual media should be addressed to his attention.

Genaro A. Florez,
President,
Florez, Inc.,
815 Bates St.,
Detroit, 26, Mich.

Poll Shows Most Radio Manufacturers Oppose 'Fictitious' Trade-Ins

NEW YORK CITY—While there has been a revival of the "$100 for Your Old Radio" trade-in offers, most radio receiving set manufacturers are opposed to the use of this type of "fictitious" trade-in allowance, and have expressed the hope that effective steps can be taken to curb such allowances, according to a poll of 30 such manufacturers by the National Better Business Bureau.

Some manufacturers, however, indicated some doubt about their policy if the practice again becomes general. Some pointed to the difficulties of controlling abuses, while some were frankly pessimistic over the possibilities of outlawing the fictitious trade-in.

"We do not share this pessimism," the bureau stated. "The fictitious trade-in 'problem' is a problem only because some few manufacturers have used it in postwar merchandising. The problem can be licked, we think, if the majority of manufacturers will continue to avoid use of the fictitious trade-in."

Brunner Mfg. Declares 15-Cent Dividend on Common Holdings

UTICA, N. Y.—Directors of the Brunner Mfg. Co. at a recent meeting declared a regular quarterly dividend of 1⅛% on the 4½% preferred stock of the company and a dividend of 15 cents a share on common stock.

Coolerator Introduces New Model

Coolerator's new "Kitchen Saver" refrigerator has a 7¾-cu. ft. over-all capacity with 6.68 cu. ft. devoted to general storage and the remaining space (at top right) sufficient to hold 25 lbs. of frozen food. List price of the refrigerator is $239.75.

'Kitchen Saver'--

(Concluded from Page 1, Column 2)

rangement provides two shelf areas for tall bottles. These will hold 15 qts. of milk, the company claims.

Interior light is standard equipment, as is the glass defrosting tray.

"Econ-O-Mizer" condensing unit is hermetically sealed and is rated at ⅛ hp. with a natural draft fin condenser. It carries a five-year warranty. Control has 10 positions.

Despite the compact design of the new refrigerator, Coolerator emphasizes that there has been no reduction in insulation, which consists of 3 in. of "Pneupro Fiber."

The cabinet is finished in white high-baked synthetic enamel.

New Presto Cookers For Electric Ranges

EAU CLAIRE, Wis.—Two new products of National Pressure Cooker Co., a deep well cooker and a six-quart Presto pressure cooker, were discussed at the concern's recent annual meeting here.

The deep well cooker is for class A household ranges of leading electric and gas cooking range manufacturers. Also, it will be sold separately for $16.95.

L. E. Phillips, president, reported that sales for the firm and its subsidiaries and divisions will total about $51,000,000 this year. This would compare with $34,582,183 for the year ended Sept. 30, 1946.

Chattanooga Refrigerator Sales Increase 25%--

(Concluded from Page 1, Column 4)

refrigerators, and ice makers and water coolers dropped off.

Clothes dryer sales more than trebled and dishwasher and sink combinations nearly trebled during October while domestic refrigerator sales increased by 25%, the report showed.

Water heater sales dropped 15%, ironers 17%, ranges 20%, clothes washers 23%, and home freezers 57%, according to the report.

Tabulation of October sales follows:

* * *

Household and Commercial Sales for Month

Product	Units Sold	Average Unit Price	Total Sales Value
Refrigerators	300	$289.92	$86,974.60
Home Freezers	15	286.62	4,299.25
Ranges	294	252.66	74,281.88
Water Heaters	248	113.42	28,127.60
Ironers	42	199.20	8,366.40
Vacuum Cleaners	171	84.53	14,454.75
Clothes Washers	379	163.38	61,921.47
Clothes Dryers	28	223.22	6,250.30
Dishwashers & Sink Comb.	14	362.57	5,076.00
Commercial Refrigerators	10	690.66	6,906.55
Air Conditioning Units	6	963.50	5,781.00
Freezing Cabinets	11	620.91	6,830.00
Milk Coolers	3	168.26	504.79
Beverage Coolers	61	333.66	20,353.15
Ice Makers, Water Coolers	5	253.69	1,268.48

UNIVERSAL COOLER EFFICIENCY MEANS

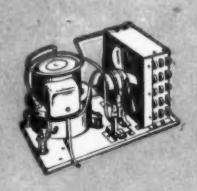
TRUE ECONOMY

IN MANY WAYS . . .

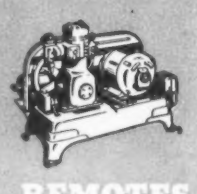
True economy is far more than a matter of price. Quality materials, precision workmanship, and long life of the unit are of vital importance. Thus, true economy is "the best dollar's worth" rather than the lowest price.

AN EFFICIENT UNIT . . .

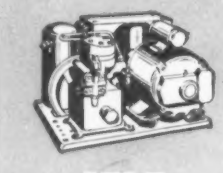
Universal Cooler, in 25 progressive years of manufacturing refrigerating units, has developed unsurpassed efficiency. Design, selection of materials, careful control over microscopic tolerances and long running in and testing procedures assure uniform efficiency in every Universal Cooler unit.



HERMETICS
1/8 H. P. TO 1/2 H. P.



REMOTES
1/4 H. P. TO 15 H. P.



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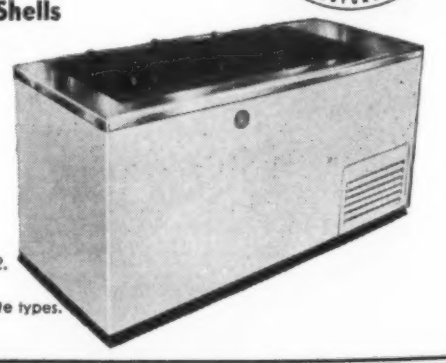

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JACK & HEINTZ PRECISION INDUSTRIES, INC., *Cleveland 1, Ohio*

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

better machine tools and enlarge their factories, and largely because they risked their savings and their reputations on new ideas and products.

Even more responsible for our nation's phenomenal growth was the good old American spirit of "an honest day's work for a day's pay." From the top down, everybody believed that if *he* worked harder we'd *all* live better. And that's exactly what happened in the United States for 180 years. Nearly everybody worked hard, and almost everyone prospered. All the world should profit by this example.

It hasn't, though. Because this uniquely American spirit helped a few families to become overrich, it is now derided on all sides. Envy and a malicious desire to "get even" now fosters and excuses loafing and malingering. Nowadays the prevailing spirit is: "Do as little as you can get by with—and grab more than you deserve." And this negative suicidal spirit is exploited by demagogues in our once-glorious nation, as well as in others.

Their passions heated up by vote-seekers, organized labor now demands higher income—and gets it—not because it is producing more, but because its bargaining position is strong. Like mercantile monopolies, it charges "all the traffic will bear." In some cases, it charges more than the traffic can bear. And that's the beginning of the end.

When labor rates are overwhelmingly extravagant, automatic machinery comes in, and laborers lose their old jobs. When coal miners are paid so exorbitantly that the price of coal becomes excessive, other fuels and energies are substituted.

When you "grab more than you deserve" you may insure your subsequent unemployment.

The same thing will occur eventually when you "do as little as you can get by with."

Bricklayers provide a notorious example of the "spirit" of the 1940's. Realizing that they are paid by the hour (as most artificers are today) and that they must be paid just as much for laying 100 bricks in that hour as they would for laying 1,000, they stack 100 bricks and then loaf. In other words, they don't produce nearly as much as they could and should.

This pratice raises the prices of new homes to a point where most customers can't afford them. So bricklayers are hired seldom. Other types of construction are substituted. Net result: bricklayers don't make nearly as much money as they could if they worked 60 minutes in every hour instead of 10 or 15.

Misled by ambitious-to-make-a-showing union satraps, our current "work less—grab more" generation resists labor-saving equipment (like spray-gun painting, for example), discourages inventions and industrial progress, insists upon "feather-bedding" employment of useless thumb-twiddlers, and prevents employers from saving up venture capital. Thus they seal their own doom—and that of their children and grandchildren.

They checkmate new enterprises, and slowly strangle old, well-heeled employers.

'Cures' Often Kill

Interference by any government with the free enterprise type of capitalism (the work-hard-and-get-ahead system) induces a mass lethargy which is much worse, in the end, than the sum total of those inequalities which the interfering government's "plan" was designed to alter.

And when an interfering government comes to grips with the failure of its first alteration of a Free System, usually it is unwilling to abandon its interference and permit the return of unfettered individual enterprise.

To cover up past mistakes, it must add more and more regulations and restrictions to its burdensome manipulation of men's wills until everybody's spunk and get-up-and-go instincts emaciate.

In time, either a goose-step military regimentation of the Nazi German pattern emerges, or else the people fall into a "so what" English type of bored passive resistance.

Who Wants to Live Like an Ant? Or, Will You Become a Rabbit?

What the Socialist-Communist missionary actually aims at (whether he realizes it or not) is the substitution of police pressure for: (1) the free choice of consumers to buy anything they want in exchange for their wages; (2) the free choice of laborers to decide what they shall do for a living and where; and (3) the free choice of individuals to determine whether or not they should work extra hard to elevate themselves.

Under Communism, bureaucratically ordered policemen force ordinary citizens to do things they wouldn't do spontaneously and of their own accord. And the police stop them from doing things they'd like to do. It's a leveling, anesthetic process of slow submersion which makes men like trees, or like stones in a rock-crusher. Communists aren't *men*, in short.

Ants are organized communistically. And domesticated rabbits (to continue the Walt Disney metaphor) are pushed around like citizens of a Soviet state. The latter are bred according to plan, their food is rationed according to plan, and they are pulled by the ears to and fro until they *act* like scared rabbits. No matter what any starry-eyed "intellectual" may tell you, the end result of Communism is this: People behave like scared rabbits.

If a state-hired policeman (masquerading under the title of "economist") fixes wage rates above the level which an unhampered labor market would set, he will increase both temporary and permanent unemployment. Why? Because unrealistic wage rates raise prices, and consumers will not buy products whose prices they deem to be unreasonable. That's what happens during a Socialist "revolution" (the non-violent kind of rebellion).

On the other hand, the inherent tendency of the capitalist evolution is to raise *real* wages steadily. The progressive accumulation and reinvestment of capital, through which methods of production and quantities of output are improved, leads *both* to higher wage rates and lower costs. Thus *real* wages leap.

Whenever the reinvestment of additional "risk money" or "seed money" stops, however, the tendency toward a further real increase in wage rates comes to a standstill.

Government measures which retard capital accumulation or which consume capital—such as confiscatory taxation—are therefore detrimental to the vital interests of all workingmen.

Do you want to become—and live like—a rabbit?

Here's the Kernel of the Corn

The intellectual crisis of our age results from a conflict between policies which are supposedly designed to "improve" capitalism, and those which would substitute another system for it altogether.

Many promoters of the Supreme State have been led by envious rancor (against those whose incomes are larger than their own) to make fools of themselves. Others have been psychoneurotics (Hitler, Mussolini) and still more have been just plain dumb. So much for them.

Again, those who suggest "improvements" on capitalism are usually embarrassed after their suggestions are adopted—because things never work out like they imagine. Most of these "improvements" are inspired by vengefulness, spite, or pique. Even the mild "do-gooders" unwittingly do more hard than good—because their hopeful, naive reforms become malicious instruments of evil in the hands of politicians.

The proof of the pudding is in the eating. It is sheer stupidity to praise any totalitarian regime—Germany, Italy, Japan, Russia—for alleged achievements which have no reference whatever to the validity of their political and economic principles. Mussolini made Italy's trains run on time. Hitler controlled prices. Hirohito made the Japs work hard and no nonsense. So what? Where are they now?

Apparently unaffected by these recent examples of the futility of the all-powerful State, communist fellow travelers are enraptured by misty Russian films, musty Russian music, and tasty Russian caviar.

But there lived greater musicians in other countries and under other social systems; superb pictures have been produced in the United States, too; and it is certainly not a merit of Generalissimo Stalin that the flavor of caviar is delicious.

Neither does the collective prettiness of Russian ballet dancers, nor the construction of a big power station on the Dneiper, expiate for the mass slaughter and starvation of the Kulaks or the suppression of free speech through the U.S.S.R.

Let's Hear Both Sides And TELL Both Sides

One of the major difficulties that clear-thinkers encounter in combating the world-wide endemic disease of totalitarianism is the fact that communist propaganda seldom has encountered competent opposition.

A paltry few devastating critiques of totalitarian results—simple reports by competent newspapermen of *what actually happened* in a communistic regime—have exposed pitilessly the futility and impracticability of socialist schemes—as they work out in actual practice. But these case-histories have never been publicized nor advertised widely.

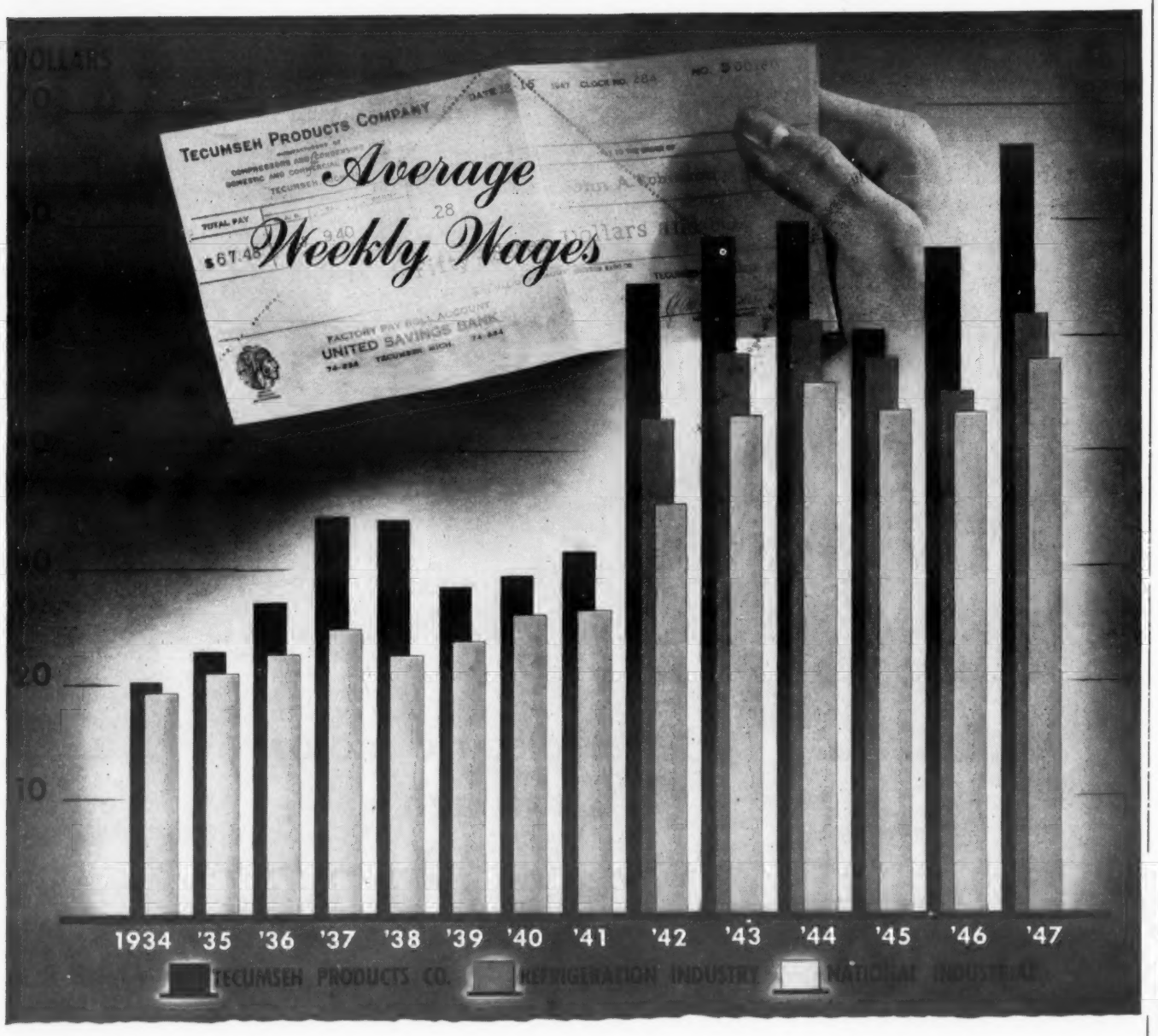
The record is available—for all who are willing to look it over. But it hasn't been dramatized or publicized sufficiently.

Apparently these explosive reports of results haven't been seen by some of the most influential molders of American public opinion—or else the latter are simply religious zealots who refuse to look a fact squarely in the face.

At any rate, despite the evidence, fuzzy-minded promoters of communism (like Henry Wallace) can still command large audiences of people *who should know better.*

And that should be a matter of serious concern to all liberty-loving Americans.

(To Be Concluded)



A Brief for FREE COMPETITIVE BUSINESS

Paychecks to America's free workers in all industries for *value produced* during the year 1946 amounted to . . . $95,887,000,000.00. Both wages and values produced have been higher during 1947. This powerful circulation of busy buying dollars supports the highest national standard of living in the world. It can be maintained and further improved only through the continued payment of high wages in return for increasingly higher productive output. High wages and high productivity depend upon each other. Both were "discovered" under a free competitive system of business.

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Here's a tip the S.E.C. can't stop!

(Reading Time—55 seconds)

The American success story..."do as the leaders do and do it better if you can"...is considered good reasoning.

So here's the tip the S.E.C. can't stop...many great American businesses, with the know-how and the capital to find out where they want to go, have chosen Liberty! Among these are:

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Paramount Pictures Inc.
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Rear-Loading Reach-In Helps Bakery Move Frozen Pastries

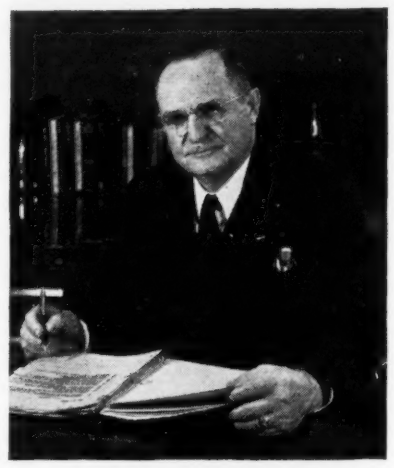
MILWAUKEE—A "two-way" refrigerator display case has been installed by Royal Baking Co., large retail bakery here, with a novel feature that all merchandise displayed for sale is "loaded from the back."

The huge refrigerator occupies an entire wall inside the retail bakery, with four sliding glass doors, behind which are five levels of shelving for frozen doughs, frozen rolls, whipped cream cakes, cream puffs, pastries, etc. Formerly, these were loaded in for display from the front of the refrigerator, with the result that customers often got refrigerated bakery products from the front which had not had enough time to chill thoroughly in the 30° F. temperature of the box, while those at the back were frozen rock-hard through remaining in the box for long periods.

The solution developed has been the addition of large doors at the rear of the refrigerator, which makes it possible to fill up the display case from the bake shop itself, pushing the cakes and other products up against the glass. All sales, however, are made from the front, with the result that as new refrigerated goods are put in from the rear, those which have been in longest are pushed toward the front.

Since making this change, the bakery has experienced no complaints from customers over the softness of whipped cream, ice cream, frozen doughs, etc. As many as 450 items may be frozen in the huge refrigerator at a time.

Manufacturing Head



LEE H. BENSON

* * *

Tuthill Pump Secures Benson as Vice President

CHICAGO — Lee H. Benson has joined the Tuthill Pump Co. as vice president in charge of manufacturing, reports G. B. Tuthill, president.

Benson comes to Tuthill with a background of mass-production experience over the past 40 years with such organizations as General Motors, Westinghouse, and Willys-Overland.

It was during World War I that Benson became prominent in the industrial world by pioneering the use of the broach in arms manufacture. When World War II came, he undertook the problem of improving gun barrel manufacture. His work with Henry Krueger resulted in drilling and chambering techniques that speeded up these processes.

Procuring Benson is a major move in the expansion plans for Tuthill Pump Co., it is stated.

2 McCray Cases Become Airline's Biggest Load

KENDALLVILLE, Ind. — Claimed to be the largest shipment of refrigeration equipment ever handled by Trans-World Airlines, two 10-ft. McCray refrigerated display cases were flown recently from Baer Field, Fort Wayne to San Francisco, the McCray Refrigerator Co. here has announced.

The two cases, and one other of the same size that was shipped by plane the next day, were destined for George Brady's Supermarket in San Mateo, Calif., the company announcement said.

The flight was arranged to meet a delivery date promised the customer by the McCray distributor in San Francisco, Scatena York Co.

In order to accommodate the cases and gain proper distribution of weight within the plane, the entire cargo compartment had to be unloaded at Fort Wayne, the company asserted. TWA engineers at St. Louis had to be consulted in order to determine stress weight and obtain proper balance, it added.

To get the McCray cases into the plane, it was necessary to remove the plane's cargo door. Once loaded the crates were securely strapped to the ship's interior. Four or five truckloads of mail and medical supplies bound for San Francisco were packed around the crates. Cargo weight totaled 6,966 lbs.

Refrigerated 'Garbage Cooler'

The walk-in (right) is located in the basement of the Garavelli Restaurant (St. Louis). By maintaining the garbage at 40° F., the cooler makes it possible for refuse to be stored until facilities permit proper disposal.

* * *

Refuse Kept In Restaurant Walk-In Permits Sanitary, Large-Quantity Disposal

ST. LOUIS—One of the most novel applications of refrigeration to restaurant operation is the "garbage cooler" which was recently installed in the Joe Garavelli, Inc., restaurant on DeBalivere and Waterman Aves.

The Garavelli restaurant, serving 1,500 meals a day, has recently remodeled its kitchen and operating facilities, to make it one of the country's top-notch eating houses. A major problem which August Sabadelli, proprietor, found it necessary to contend with was the nuisance of getting rid of garbage as fast as it accumulated, in order to do away with objectionable odors.

Incineration alone was not enough, inasmuch as the incinerator smoke would carry garbage odors around the restaurant's location, and consequently, it was necessary for a truck to roll back and forth continuously carrying away waste food.

In the $50,000 remodeling of the kitchen, however, a perfect solution has been found in the form of a 10 x 12-ft. walk-in refrigerator, cork-insulated and cement-lined in the basement. This, entirely enclosed away from the rest of the restaurant, accommodates 12 full-size garbage cans, which are moved inside the doorway when filled, and pushed back by succeeding cans until the room is full.

Refrigeration for the cooler is applied by a No. 380 Marlo blower-and-coil unit which keeps the temperature at an even 40° at all times. Kept under refrigeration, the Garavelli restaurant has found that the garbage loses most of its objectionable odor, and it is possible to accumulate it one week at a time, and carry the entire inventory of 12 cans away at one crack.

Scaife, Ogden Named To Key Hotpoint Posts

CHICAGO — Appointments of Howard J. Scaife as manager of market development, and William F. Ogden as manager of product planning, have been announced by L. C. Truesdell, vice president of marketing of Hotpoint, Inc. The newly created positions will function under Mr. Truesdell.

The market development position was designed to "emphasize the development of specialized markets, and to keep abreast of changes in marketing brought about by the increased importance of electrical living to the postwar consumer."

Mr. Ogden will be responsible for the coordination of product planning with marketing and merchandising plans, and the development of products from the marketing phase.

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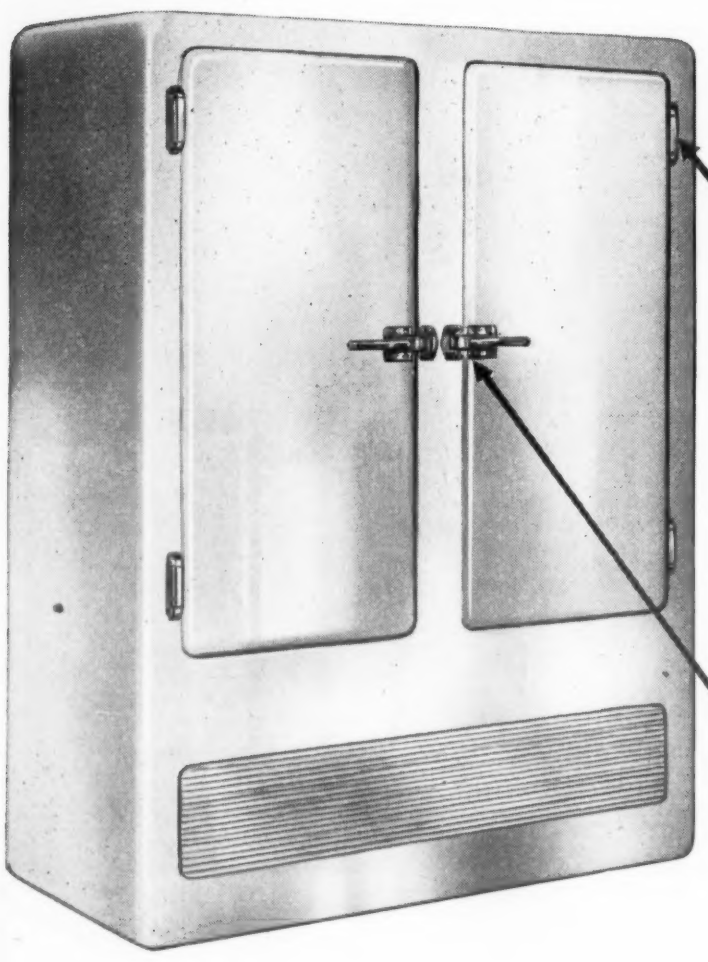
REFRIGERATOR HARDWARE

By National Lock



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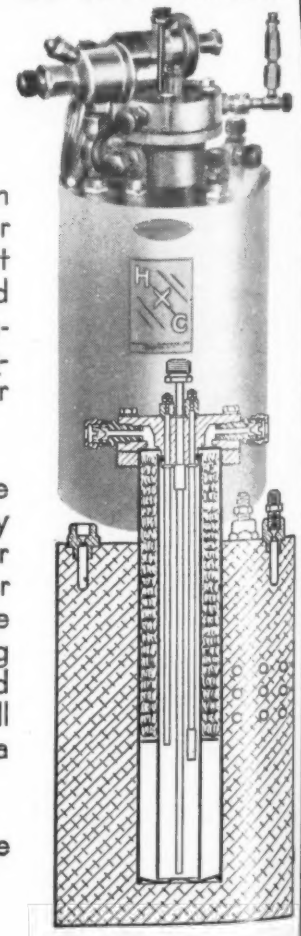

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Compact pump, motor and relay in one small unit.

THE HEAT-X-CHANGER CO., INC.
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Foundation Report Stresses Year-Round Availability of Frozen Foods While Many Fresh, Canned Items Remain Hard-To-Get

SYRACUSE, N. Y.—In the past two years, meal planners have found frozen foods more dependable in month-to-month supply than either canned or fresh foods. In this same period, the price spread between frozen and fresh foods has narrowed considerably. These are the two major findings of a survey just published by Frozen Food Foundation, Inc., of Syracuse.

The Foundation's detailed report, appearing in the October issue of *Food Freezing* magazine, is based on a 20-month analysis of 25 frozen foods and their fresh and canned counterparts in five major Syracuse food outlets.

In this period, the report states, two-thirds of the fresh items were off grocers' shelves from one to 18 months, but Syracuse housewives could have bought the same foods in frozen form during all that time. In the same 20-month period, more than half the canned products were missing from the shelves from one to 10 months, but were available to food shoppers in frozen form.

In the first six months of 1946, the report indicates, about 80% of the fresh items had a "serving cost" equal to or less than the comparable frozen products. In the same months of 1947, however, only 70% of the fresh items had this favorable relationship.

It cost Syracuse housewives more to serve fresh peas, apricots, mackerel, porterhouse steak, plums or center-cut pork chops than it did frozen.

In the foreword to the article, Gerald A. Fitzgerald, secretary-director of the Frozen Food Foundation, frankly admitted that price is a major point of consumer resistance to frozen foods. But he stressed that as the "hidden" costs of inedible portions of fresh and canned foods are recognized, consumers will see that completely-edible frozen foods are desirable not only in money terms, but also because of their extra convenience, quality, and variety.

The authors of the Foundation report, Irene K. Marvin and George Loft, recognize that food supplies were unbalanced during much of the period studied, but point out that their study does show the actual conditions faced by Syracuse homemakers in the months surveyed.

The report also gives credit for frozen foods' fine showing to the home-delivery frozen food service operated in Syracuse by the Dey Bros. department store. In addition to staple frozen fruits and vegetables, Dey's service also provided housewives with continuing supplies of frozen meats, fish, poultry, and a wide range of other products.

Collecting the price data and translating them into "per serving" costs was done by Miss Marvin, of the Foundation's Nutrition & Food Economics Laboratory. Mr. Loft, the Foundation's economist, analyzed the figures and prepared the article.

"The report data," Loft stated, "can be the basis of a consumer information program of much importance to the frozen food industry. These facts should be widely circulated because they allow the housewife to judge the true relative values of frozen, fresh, and canned foods."

The Frozen Focd Foundation, established over two years ago as a non-profit frozen food "bureau of standards," is sponsored by some 50 U. S. and Canadian firms. The price report is one aspect of its research and service program, which also includes food testing, merchandising assistance, personnel training, and an extensive information and promotional program with consumer groups.

Refrigerator Built Like Small Meat Case Moves Frozen Baked Goods

PROVIDENCE, R. I.—A novel display refrigerator for frozen baked goods has paid for itself in a matter of three months at the Parade Bake Shop here, according to Ernest Amore and Dan Talone, owners.

Experimenting with refrigerated baked goods for the first time Amore and Talone went to a local refrigeration contractor to build a display case which is a miniature of a standard, sloping-front meat case. In white porcelain, the case slopes back from knee-height to average counter-height, and has an inset display window 6 ft. long by 2 ft. wide, trimmed in chrome. Behind this are two chromium wire rack shelves on which are shown refrigerated whipped cream cakes, European-type pastries, ice cream cakes, and meringue products.

The case was installed as part of the regular counter in the Parade Bake Shop, and immediately began attracting attention, because of the lettering "Refrigerated for your health" which appears across the front of the case and over the window.

"We sell twice as many specialty baked items because customers read this sign than if they were merely displayed with no comment," Talone said. "We think that this is the first refrigerated case for bakery products in our area, and that including the information that the products were refrigerated for the customer's health, we have provided an extra selling 'hook' which makes women sit up and take notice."

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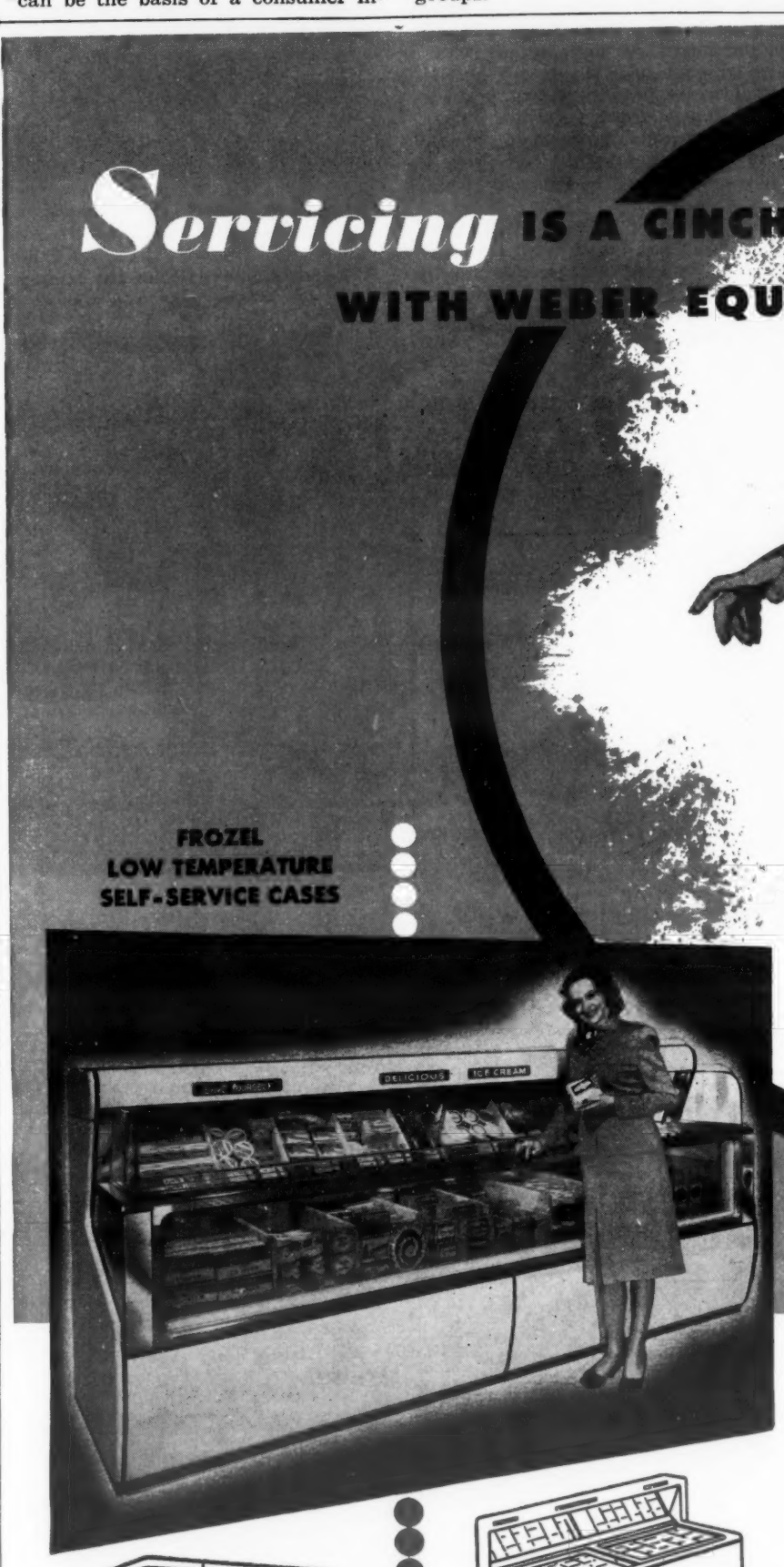

FROZEL
LOW TEMPERATURE
SELF-SERVICE CASES

WEBER REACH-IN, WALK-IN BOXES

WEBER ROLL-A-DOOR FROZEN FOOD AND ICE CREAM CABINETS

WEBER DISPLAY MASTER MEAT CASES

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. . . that's why Refrigeration Service Organizations everywhere find Weber Servicing Contracts are a money-making proposition, for service is made easy and customers are kept happy by Weber developments in design and refrigeration engineering, by the high quality of Weber materials and workmanship . . . and there's Weber equipment in every retail field, fine, modern equipment that requires but simple servicing to keep it in perfect running order. You, too, will find that service is a cinch, and profitable, with Weber Equipment . . . the most complete line of refrigerated display equipment in the world!

INVESTIGATE . . . AND YOU'LL INVEST IN WEBER

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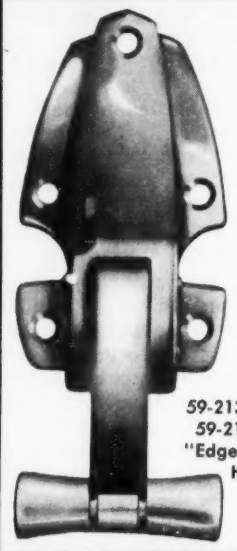
ALL WEBER SELF-SERVICE CASES ARE PROTECTED BY U. S. PATENT NO. 2,083,448. EVERY ROLL-A-DOOR IS FULLY PROTECTED BY U. S. PATENT NOS. 2,230,511 AND 2,236,833.



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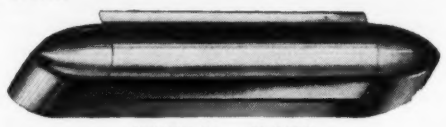
LOW-TEMPERATURE REFRIGERATION HARDWARE

Brand new, unused equipment in large quantities for immediate disposal.

The Low Temperature Refrigerator Hardware Lock No. 59-213 is designed primarily for adaption to table-top Low Temperature Cabinets with an offset cover. The "T" handle design permits a natural lifting action. "Roller Action" bolt for ease of operation and for long continuous wear, is the same type of mechanism as now used on heavy duty commercial refrigerators. Manufactured of Zinc Die Cast Material; Handle of Yoke Stainless Steel; and Handle Tips of Plastic. Padlock eye for positive locking. Lock and Strike are countersunk for No. 10 Oval Head Screws. Hinge has a stainless steel cover. Wire or write Mr. Wise, Box 2586, Air Conditioning & Refrigeration News.

59-213 LOCK and 59-214 STRIKE "Edge Mounted" Hardware



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Wall WIRE PRODUCTS COMPANY

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Makers of

REFRIGERATOR SHELVES • STAMPINGS

FORMED AND WELDED PRODUCTS

We had the privilege of making the First Refrigerator Shelves of Stainless Steel Wire, which were used in Refrigerator Cabinets

G-E Two-Door Model--

(Concluded from Page 1)

day, but goes into the freezing compartment for ice and frozen foods only a few times a day. In the G-E combination refrigerator, therefore, a separate door is provided for the freezing section."

Maintenance of zero temperature in the freezing compartment of the new refrigerator is assured by the independently controlled refrigerating systems, Miller said. The sealed-in-steel primary system refrigerates the freezer. The hermetically sealed secondary system refrigerates the walls of the fresh-food compartment.

Three inches of glass-wool insulation surround the fresh-food section, while four inches are used around the freezing compartment.

"The problem of defrosting a refrigerator is completely eliminated in the fresh-food section of the NH-8 because there is no exposed freezing compartment," Miller states. Moisture which condenses on the refrigerated walls, is automatically dissipated, it is claimed.

The freezing compartment is said to require defrosting twice a year—when the housewife wants to clean out the section.

The humidity of the fresh-food compartment is kept high so that moist foods need not be covered to prevent their drying out, G-E claims. For vegetables that require exceptionally high humidity, two 6-in.-deep glass-covered drawers are provided.

Built into one wall of the fresh-food compartment is a butter conditioner which keeps one pound of butter at spreading softness.

Because it is powered by the small refrigerating unit announced earlier this year, the refrigerator provides two extra cubic feet of food storage space in a cabinet that occupies no more floor space than the usual 6-cu. ft. box. The NH-8 is roughly 30 in. wide and 63 high.

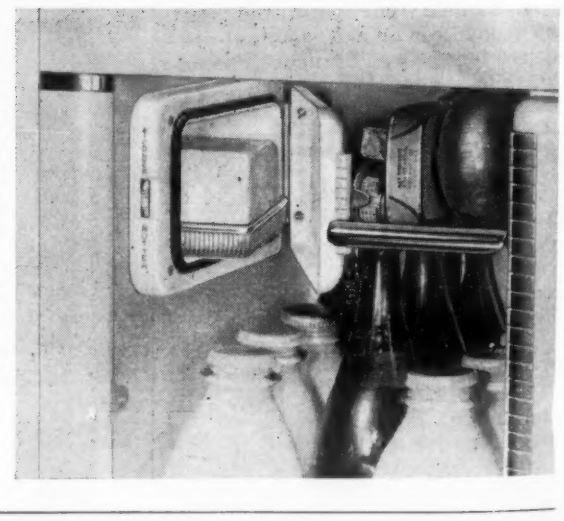
Shelf area totals 14.4 sq. ft. Four ice cube trays are provided.

The one-piece steel outer shell of the refrigerator is finished in improved Glyptal baked enamel, while the fresh-food compartment is finished in porcelain. The freezing compartment is of corrosion-resistant aluminum.

As shown above, the freezing compartment of the General Electric combination refrigerator has its own door, controls, refrigerating mechanism, and is insulated from the other section. Maintaining a constant 0° F. temperature, it permits the housewife to store commercially frozen foods up to one year and also to freeze food, the company claims.

The fresh food storage compartment has a capacity of 6.7 cu. ft. and maintains a high relative humidity. The entire refrigerator has a capacity of 8.2 cu. ft. but is claimed to take up no more space than the normal 6 cu. ft. box

At right is shown the butter conditioner in the new G-E combination refrigerator. Built in the left wall of the refrigerator, it is said to keep a pound of butter at a smooth spreading temperature. Though the butter conditioner was introduced before the war, this is the first postwar model to have it.



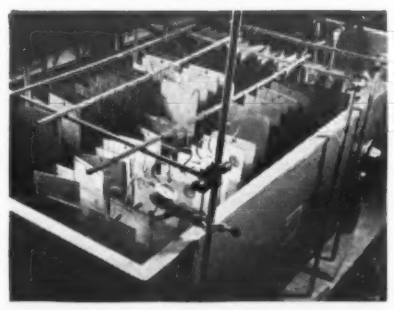
Use this SEAL ...to get more "SELL"!

Point it out to identify America's leading kitchen appliance finish. It helps sell customers . . . keeps them sold

THE "DULUX" SEAL OFTEN GIVES a valuable "assist" in turning a hard-to-please prospect into a *customer!* Because many thousands of folks know and respect the name DULUX. To them, the seal serves notice that they're looking at a finish incorporating color retention, mar-resistance, and outstanding good looks for *years of service.* So it's just plain "good business" to point the seal out . . . "good business," too, to mention that DULUX is rigidly pre-tested!

If your manufacturer supplies you DULUX-finished ware *without* the seal, ask him to include it hereafter. Use it to swell your list of satisfied customers!

E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington 98, Delaware.

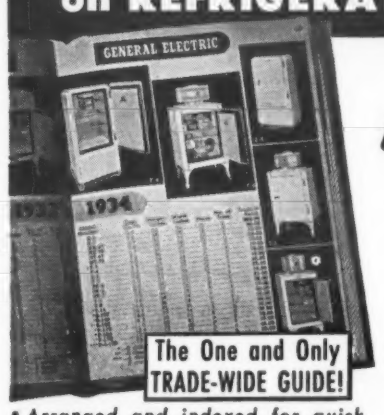


Pre-testing like this keeps DULUX out in front. Here, panels finished in DULUX are tested in an immersion bath for resistance to moisture and soap. One of scores of scientific tests that simulate . . . and surpass . . . actual kitchen wear.

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . THROUGH CHEMISTRY

The STANDARD Reference Manual on REFRIGERATORS and FREEZERS



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Use the Standard Manual to identify and evaluate every refrigerator and freezer accurately.

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NOTE—*A limited quantity of current (1946) edition still available for immediate delivery.*

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(We pay postage on prepaid orders.)

'Portal-to-Portal' Act Effect on Repairmen--

(Concluded from Page 1)

Portal Act was intended to exclude.

"Also, where an employe travels outside his regular working hours at the direction and on the business of his employer, the travel would not ordinarily be" exempted.

"One example would be a traveling employe whose duties require him to travel from town to town outside his regular working hours; another would be an employe who has gone home after completing his day's work but is subsequently called out at night to travel a substantial distance and perform an emergency job for one of his employer's customers.

"In situations such as these, where an employe's travel is not of the kind to which . . . the Portal Act refers, the question whether the travel time is to be counted as worktime under the Fair Labor Standards Act will continue to be determined by principles established under this act, without reference to the Portal Act," declares McComb.

Just what constitutes "preliminary" or "postliminary" activity varies with conditions, he also points out.

"Waiting before the time established for the commencement of work would be regarded as a preliminary activity when the employe voluntarily arrives at his place of employment earlier than he is either required or expected to arrive.

"Where, however, an employe is required by his employer to report at a particular hour at his workbench or other place where he performs his principal activity, if the employe is there at that hour ready and willing to work but for some reason beyond his control there is no work for him to perform until some time has elapsed, waiting for work would be an integral part of the employe's principal activities.

"The difference in the two situations is that in the second the employe was engaged to wait while in the first the employe waited to be engaged."

Elsewhere in the statement McComb discusses what constitutes the "principal activity" of an employe. He states, in part:

"Among the activities included as an integral part of a principal activity are those closely related activities which are indispensable to its performance.

"If an employe in a chemical plant, for example, cannot perform his principal activities without putting on certain clothes, changing clothes on the employer's premises at the beginning and end of the workday would be an integral part of the employe's principal activity.

"On the other hand, if changing clothes is merely a convenience to the employe and not directly related to his principal activities, it would be considered as a 'preliminary' or 'postliminary' activity rather than a principal part of the activity.

"However, activities such as checking in and out and waiting in line to do so would not ordinarily be regarded as integral parts of the principal activity or activities."

Rough-Surfaced Tubes In Flooded Evaporator Increase Heat Transfer, ASRE Group Hears

PHILADELPHIA—Use of rough tubes in a flooded evaporator increases heat transfer because the rough surfaces permit rapid release of the gas bubbles which form on the tube, pointed out Richard M. Armstrong of the Downingtown Iron Works, Inc., in a discussion on "Heat Transfer In Refrigeration" before the Philadelphia Section of the American Society of Refrigerating Engineers.

Because of this action, he said, a tube with a fin construction similar to that of a Wolverine tube is to be preferred as against a prime surface tube.

A tube with a longitudinal fin is now being employed in suction line heat exchangers, although this type of tube has a lower heat transfer than a conventional finned tube, according to Armstrong. The longitudinal finned tube, however, is ideal for this service as it causes little pressure drop through the exchanger and still permits obtaining large capacities in vessels of small cross sectional areas, he stated.

Bi-metallic tubes, which are now available in many combinations of inner and outer surface metals, require care in their application, cautioned Armstrong. They must be placed in the tube sheets so that the corrosive material being heated or cooled will come in contact only with the corrosive resistant metal.

Proper spacing of baffles placed across tubes in water coolers to increase the flow through the shell is likewise important, he commented. If the baffles are too close to each other, as much as two thirds of the material being circulated can be by-passed through tube holes in the baffles and through the space between tube baffles and shell, said Armstrong.

At this meeting the Philadelphia section had as guests engineering students from Temple university. The group plans to invite students to future meetings from the 17 universities in the Philadelphia area.

Large Dredges Will Use Frick Refrigeration Units

WAYNESBORO, Pa.—The Dredge "Caribbean," said to be the largest of its class, and its sister ship the "Chicago," soon to be commissioned, will each contain refrigeration systems which include two Frick 5 by 5 combined ammonia compressors.

The machines are said to cool a 1,000-lb. Victor ice maker, a 16-in. by 6½-ft. Frick pressure-type cooling tank for drinking water; a frozen meat storage room, measuring 7 ft. by 5 ft. held at 0° F. by banks of Kold-Hold freezer plates; and a vegetable storage room 7 ft. by 10 ft. held at 40° F. by a Larkin finned ceiling coil unit.

Operation is completely automatic as each system is equipped with Frick electric control valves and other accessories, it was pointed out.

Each unit has a 15-hp. motor, allowing it under normal conditions to carry the entire load. However, when working in the Gulf of Mexico, both units will be used to compensate for the tropical sun load.

Standard-Keil Hardware Moves Plant, Offices to Brooklyn

BROOKLYN—Standard-Keil Hardware Mfg. Co., Inc., formerly located in Bristol, Pa., has announced the removal of its plant and general offices to new quarters at 2413-23 Atlantic Ave. in Brooklyn.

Manufacturer of the "Francis Keil" line of refrigerator hardware, and the "Standard" line of showcase hardware, the company is in full production at the new plant.

New Air Conditioning, Heating Firm Incorporated In Alabama

TALLASSEE, Ala.—Announcement of the incorporation of the Gas Service & Supply Co., Inc., here was made Nov. 13. The new corporation will deal in heating, plumbing, air conditioning, gas appliances, both sale and installation, and will maintain a service department.

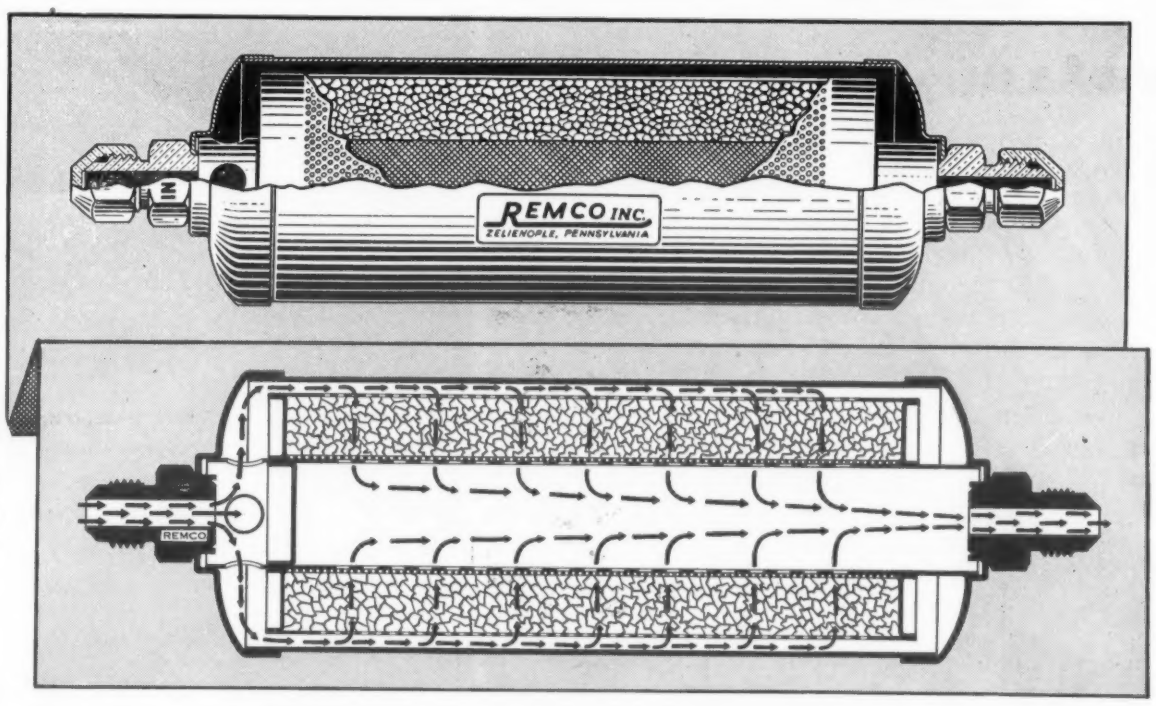
The corporation is headed by Lloyd Emfinger, as president and general manager; B. G. Stumberg, vice president; and A. J. Noble, secretary-treasurer.

YOU SHOULD KNOW ABOUT THE NEW "Cross-Flo" DRIERS THAT POSITIVELY WILL NOT CLOG!

says Mr. Ken Newcum, president of REMCO, Inc.

"And No . . . I'm not sticking my neck 'way out when I say 'will not clog'. I know from the compliments and endorsements we've had from thousands of refrigeration men and service engineers that CROSS-FLO drier-filters will do all we claim for them. These same thousands have installed CROSS-FLO's on their large commercial jobs and, as a result, have changed their entire viewpoint on driers—they now agree that our exclusive new principle of flowing the refrigerant slowly ACROSS the thin cylindrical bed of drying agent, instead of forcing it through a long powder-clogged bed, has prompted an almost revolutionary new conception of drier operation.

"We stand behind our claim that these new drier-filters positively will not clog. That's why we say, 'You too should know about CROSS-FLO'."



Look at the above diagram . . . follow those arrows . . . see the slow flow of the refrigerant *ACROSS* the thin cylindrical bed of drying agent and through the extra large, highly-efficient fine filter. You'll see the answer, in a nutshell, to "CROSS-FLO's" efficiency.

You owe it to yourself and to your future business to examine and try the new heavy-duty "CROSS-FLO." Go to your wholesaler now.

Carried in stock by leading wholesalers everywhere.

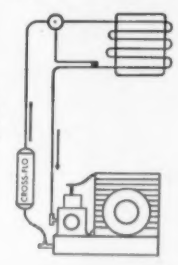
See and examine the new Heavy-Duty "CROSS-FLO" in Booth No. 425 at the Cleveland All-Industry Exposition.

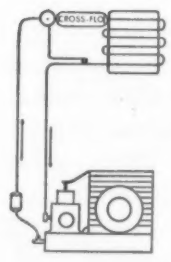
REMCO
INCORPORATED
ZELIENOPLE, PENNSYLVANIA

DRIERS • DRIER-FILTERS • FILTERS • HEAT-EXCHANGERS

WHERE DO YOU INSTALL YOUR DRIER-FILTERS?

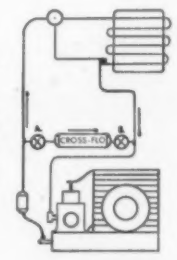
In the Liquid Line?
At this location the refrigerant is hottest and the drying agent least efficient. CROSS-FLO permits this installation because it positively eliminates pressure drop and clogging.



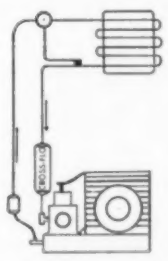


Between Refrigerant Control and Evaporator?
At this location the refrigerant temperature is lowest and the efficiency of the drier highest. CROSS-FLO is ideal for this location—use with a filter in the liquid line to keep out foreign matter.

In By-Pass Between Liquid and Suction Line?
Open valve B all the way. Open valve A slightly and regulate it to keep frost line between drier and compressor. CROSS-FLO takes full advantage of low-temp refrigerant—becomes very efficient in this installation.



In the Suction Line?
Because of the exclusive CROSS-FLO design, REMCO Heavy-Duty may be installed in the suction line on all sizes, up to and including the size of connections on the drier, without pressure drop. And . . . CROSS-FLO may be left in the suction *permanently*.



For answer to these and other everyday refrigeration problems write for additional free information and literature. Request Circular 711-A, Remco, Inc., Zelienople, Pa.

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USE CHICAGO SEALS and VALVE PLATES

Precision lapping, superior construction and simple installation make Chicago seals ideal for replacement.

Only Chicago valve plates have replaceable seats.

PERFECT BALANCE

Chicago Seals

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Railroad Polls Commuters on Group Plan To Pay Extra for Air Conditioned Coaches

NEW YORK CITY—Air conditioned rail coaches—the dream of every weary commuter—are perhaps a step closer on the Jersey Central.

This line, known formally as the Central Railroad of New Jersey, carries an annual total of approximately 13 million commuters from Jersey to points in and about New York City. Under a new plan drawn up by Jersey Central officials some passengers may soon be able to "lease" special, air conditioned coaches for a fee that will amount to scarcely more than 10 cents additional per ride for each passenger.

In an effort to find out how many of its patrons are interested in the plan the road has begun polling them. Principal question asked is:

"Would you be interested in participating in a commuters' club travel plan to secure the advantages of air conditioned commuting?"

Here, briefly, is the way the proposal would work:

Jersey Central would obtain several coaches fitted out with air conditioned "commuter clubs" on an annual lease guaranteeing 64 passengers each trip.

Such coaches could then be reserved for club members by payment of a yearly fee of approximately $2,800-$3,500.

For example, a "club" commuting between Raritan, N. J. and New York City would pay Jersey Central $3,270 for a private year-round car. Air cooling would operate during the hottest months on a fairly flexible basis. Figured on an individual basis, the fee for the club's coach would cost each subscribing commuter something like $4.25 a month all year, or about 10 cents a ride. This fee would, of course be in addition to the regular fare.

Although Jersey Central officials would like to equip all suburban coaches with air conditioning, they feel that the $4 million expense involved would be prohibitive. This road claims that last year its losses from passenger service amounted to over $6 million.

"If a sufficient number of our commuters are interested in this plan," Jersey Central said, "we will arrange to put it in effect immediately and will provide the coaches as soon as the necessary air conditioning equipment can be obtained and installed."

MARSH

Pressure Gauges
Dial Thermometers
★The gauge with the Recalibrator
Ask for this New Refrigeration Booklet
JAS. P. MARSH CORP.
DEPT. O, SKOKIE, ILLINOIS

1'ST IN LINE AT THIRST TIME!
OASIS—made by the world's largest maker of electric drinking water coolers—is *first in line* when it comes to delivering complete thirst relief at low cost. Write for details.
The EBCO Manufacturing Co.
401 W. Town St., Cols. 8, Ohio

OASIS
ELECTRIC WATER COOLERS

$150,000 Panama Night Club To Have Air Conditioning

WASHINGTON, D. C.—A $150,000 night club now under construction in Colon, Panama, will be air conditioned and will have a built-in freezing room and storage space for the refrigeration of imported foodstuffs, it is reported by the Department of Commerce.

Wile Heads Engineering For Recold; To Develop Air Conditioning Line

LOS ANGELES—Daniel D. Wile, former manager of Carrier Corp.'s engineering laboratories, is now chief engineer of Refrigeration Engineering, Inc., here, announces Hy Jarvis, "Recold" vice president and general manager.

Wile's activities in his new post will include development of air conditioning equipment, in addition to the engineering and further development of refrigeration coils and evaporative condensers.

"It is the intention of 'Recold' to manufacture a line of air conditioning units just as soon as factory engineering and research can be completed," the announcement said.

Prior to his association with Carrier, Wile was chief engineer of Detroit Lubricator Co.'s refrigeration and air conditioning division. Later, he was chief engineer of the refrigeration division of Savage Arms Corp.

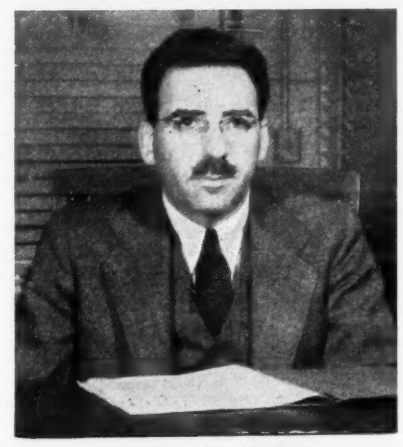
A graduate of the College of Engineering of the University of Kentucky, Wile has been a member of the American Society of Refrigerating Engineers since 1934 and is at present chairman of several ASRE committees. He is also a member of the American Society of Heating and Ventilating Engineers and is active in other associations.

Wile's experience in the industry covers nearly a quarter of a century. It is marked by many developments for which he received several patent awards and by which he has become known as an outstanding technical authority.

He has given numerous speeches and written many articles on both practical and technical subjects pertaining to his work. In 1944, he received the Wolverine Award for the outstanding article appearing in the publication *Refrigerating Engineering*. The article was on "Psychrometry in the Frost Zone."

The announcement of Wile's appointment followed the recent announcement that Refrigeration Engineering was planning to expand its distribution to cover the entire country. Earlier, "Recold" announced the appointment of Sterling F. Smith as direct factory representative in the east and midwest.

Shifts to Coast



DANIEL D. WILE

Liberty Building In Capital To Be Cooled

WASHINGTON, D. C.—Washington's Liberty Building Association has announced that the three story building it is erecting at 1407 G. St., N.W. here will be completely air conditioned.

Upon completion of the new building, the association will occupy the first floor and mezzanine and lease out the two upper floors. Porter & Locke are architects for the structure, while Walter B. Avery is general contractor, according to the announcement.

Kentucky Grocery Is Air Conditioned

CINCINNATI — Smith's Quality Foods, 502 East 10th St., Newport, Ky., a recently constructed store, is equipped with a Carrier air conditioning system.

In addition to the air conditioning, the store has refrigerated equipment to handle self-service on meats, fruits, and vegetables.

Contractors of N. Calif. To Elect 5 Directors At Dec. 10 Meeting

SAN FRANCISCO—The 1947 annual meeting of the general membership of the Refrigeration Contractors Association of Northern California will be held here Dec. 10.

The meeting is primarily intended for the election of replacements for four directors whose terms expire Dec. 31, 1947, and for one resignation, making a total of five directors to be elected. A nominating committee appointed by President James A. Scatena, of the Scatena-York Co. of San Francisco, is already at work.

In addition to these elections, committee reports on the Association's progress and accomplishments for the year to date will be rendered the general membership. Among these accomplishments is the work performed by the Association in securing the passage by the California Legislature of the law prohibiting less-than-list sales of refrigeration in the State of California by dairies, creameries, and ice cream companies. (Full story of this was given in the Aug. 18 issue.)

Since that story was published in the NEWS, the Refrigeration Contractors Association of Northern California has been bombarded with letters and telegrams from similar associations all over the United States requesting advice and "how to do it" on this unique achievement so that they too might work toward the same goal in their respective communities, officials of the group report.

The election meeting will be in the form of a dinner to be held at a swank San Francisco restaurant and present indications are that the attendance will reach well over the 100 mark. In addition to a deluxe steak dinner, plans are under way for elaborate entertainment during the dinner and attendance by Hollywood and Broadway celebrities currently fulfilling theatrical engagements in San Francisco.

The program committee in charge of the arrangements and tickets for the gala affair is headed by Everett H. Stahl, Silver-Stahl Corp.

Premiere showing of
Miracula
BY GEMCO
THE HEAT PUMP THAT...
Has aroused interest from coast to coast ☆ Was featured in an article in Better Homes & Gardens ☆ Promises to revolutionize home heating and air conditioning ☆ Offers a great new field for distributors.
ALSO A DISPLAY OF THE
1948 GEMCO AIR CONDITIONER
With 2-stage compression—Aluminum compressor and motor housing—Non-inflammable Fiberglas insulation—Vibration-free operation—Compressor motor cooled by refrigerant gas—and many other exclusive features.
See them at the
5TH ALL-INDUSTRY REFRIGERATION AND AIR CONDITIONING EXPOSITION
Public Auditorium
Cleveland, Jan. 26 to 29
(Booths 315-317-319)
and at the
8TH INTERNATIONAL HEATING AND VENTILATING EXPOSITION
Grand Central Palace
New York, Feb. 2 to 6
(Booths 263-4-6)
Gemco
AIR CONDITIONING
General Engineering and Manufacturing Co.
4417 OLEATHA, ST. LOUIS 16, MO.
Makers of Gemco Precision Shapers and Machine Tools, Gemco Oil Field Equipment, etc.

Field Report

One of the NEWS' most popular prewar features, the newly-resumed "Field Report" prepared by the editors and staff correspondents, will continue to report what distributors, dealers, and service contractors are finding out about the market, effective promotion, prices, service charges, etc.

'We Haven't Forgotten You,' Michigan Dealer's Friendly Note Reminds Customers on Waiting List

FLINT, Mich. — All waiting lists have been abandoned at the Boswell Maytag Co. appliance store here except on conventional type washers, pop-up toasters, and Mixmasters.

Washer demand is still very high, according to E. S. Dickerson, sales manager, though back orders have dropped from a postwar peak of 1,800 to between 700 and 800 today.

Orders placed back in April, 1946, are now being filled, he said. However, the company is finding that some prospects, for one reason or another, are no longer active.

As a result, new customers are being asked to sign a priority agreement and make a token payment. Though the customer has the right to ask for his deposit back at any time, this procedure helps to confine the list to genuine orders, he indicated.

To keep the listed prospects interested, the company periodically sends out factory-prepared "courtesy" cards. A typical card reads:

"One of our customers stopped in yesterday to say she hadn't heard from us lately about the new Maytag she has on order. You're probably wondering about your Maytag, too.

"We just want you to know that *we haven't forgotten you!* It's difficult to tell you just when we'll have your new washer . . . but we're always mindful of our obligation to deliver *your* Maytag *just as soon as possible,* without being unfair to the folks ahead.

"So—thanks for being patient just a little longer—and you'll be glad you waited for a Maytag! Your Maytag Dealer."

Unlike washers, refrigerators and ranges are sold from the floor, and the home freezer situation has Boswell out scurrying for customers. Despite the varied freezer line carried, six nationally-known brands ranging from 3 cu. ft. to 25 cu. ft., sales have proved discouraging.

Two reasons for public apathy have been the high price of the freezers and lack of general knowledge of what a freezer will do, Dickerson said. One line is being dropped outright because its price is excessive. Customers also object to its size and finish, he added.

Believing that there are too many freezer manufacturers in the field today, he expressed the opinion that fewer makes would improve the sales picture.

Poor sales cannot be attributed to the firm's failure to push freezers, however. Forrest W. Boswell, owner and manager, who writes his own advertising copy, has adapted freezer promotions to fit the season.

For instance, during the pheasant and deer hunting seasons, the attention of hunters was called to the advantages of freezing and storing their game. Locker processing and home freezer storage were recommended in large 20-in. newspaper advertisements.

At the present time, Boswell employs three salesmen, five servicemen, and one service helper.

With merchandise as short as it is, Boswell believes that it would be unfair to both the store and the salesmen to put them on a commission basis. So they are on straight salary. Offering them commissions at this time would only cause a dogfight among them, Dickerson indicated.

Servicemen are paid on an hourly basis. Two are assigned to work on refrigerators and ranges, two on washers, and two on ironers and other appliances.

The firm, now located on N. Saginaw St., is entering its twenty-second year in the appliance business here, Dickerson said.

Campbell Named Head of Rex Cole Merchandising

LONG ISLAND CITY, N. Y.—Rex Cole, president, Rex Cole, Inc., announces the appointment of E. Hamilton Campbell as vice president in charge of merchandising. Prior to World War II, Campbell managed the advertising and sales promotion department of the Rex Cole organization.

Programs for merchandising the Rex Cole air circulator, electric clock, and the new Rex Cole lamp have been assigned to Campbell for development.

New Electromaster Distributor Covers Counties In 3 States

MT. CLEMENS, Mich.—Williams & Martin Corp., Cincinnati, has been appointed a distributor for Electromaster ranges.

The new distributor's territory covers counties in three states: Ohio, Kentucky, and Indiana.

Housewives' Panel Group To Analyze Appliance Design, Selling Methods

SPOKANE, Wash. — John Boothe, of the Brown-Johnston Co., was re-elected president of the Spokane Chapter, Inland Empire Electrical Dealers Association, at its first anniversary meeting.

Other officers named were: V. J. Morris, vice president; Kenneth Hughes, treasurer; Frank Toole, secretary; Stanley Densow, Edward Falls, Jr., and M. E. LeCounte, directors.

Boothe called attention to association projects which have benefitted the industry. He declared that research into retail operating costs, methods of compensating salesmen, costs of cooking and water heating with electricity and liquefied petroleum gas, and other association undertakings had proved valuable.

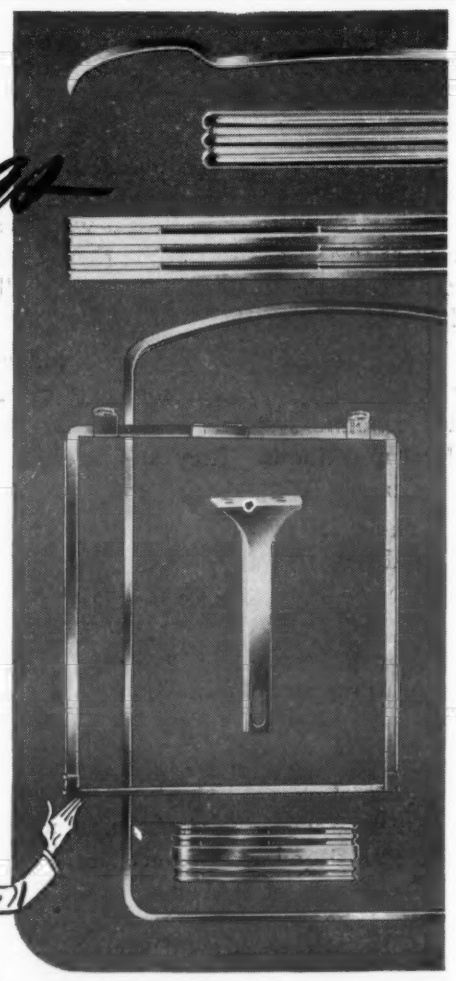
Robert L. Wilkinson, executive secretary, announced that customers of electrical dealers would be invited to attend district meetings to be held throughout the Inland Empire. He said that talks would be presented on such subjects as the need for adequate wiring, how to get good radio reception in the home, getting maximum satisfaction from home freezers and kitchen planning.

It was further announced that consumer panels, consisting of housewives selected by various women's organizations, will be asked to analyze various electrical appliances and advise association members and their suppliers on improvements that might be made, desirable features that should be added and merchandising methods that would serve customers best.

R. B. McElroy, residential sales manager of the Washington Water Power Co., described his company's plans for providing special services.

Others presenting reports at the meeting included Richard Nelson, Frank Toole, Kenneth Hughes, V. J. Morris, E. S. Berquist, Stanley Densow, and Lester Barnes.

Mouldings to Blend with YOUR Product's Design



● Moulding is an integral part of effective design. Be sure mouldings for your products are right with mouldings by JOHN LEES. Stainless steel moulding may be the answer to a problem which might have required more expensive, and less attractive, castings or stampings. Consult our engineers, experienced in meeting moulding requirements for decorative trim, frame assemblies, functional channels, and other applications. Let mouldings by JOHN LEES help make sales for you.

● *Send for free analysis, recommendations and costs on your rolling, forming and polishing requirements. Hundreds of standard sections. Special sections made to specifications.*

NEW! Electrolytic Polishing!

● JOHN LEES is equipped to polish either mechanically or by the new electrolytic method. The latter is superior for punched, stamped, and formed surfaces; produces a gleaming finish over the entire surface. In many cases it is less costly

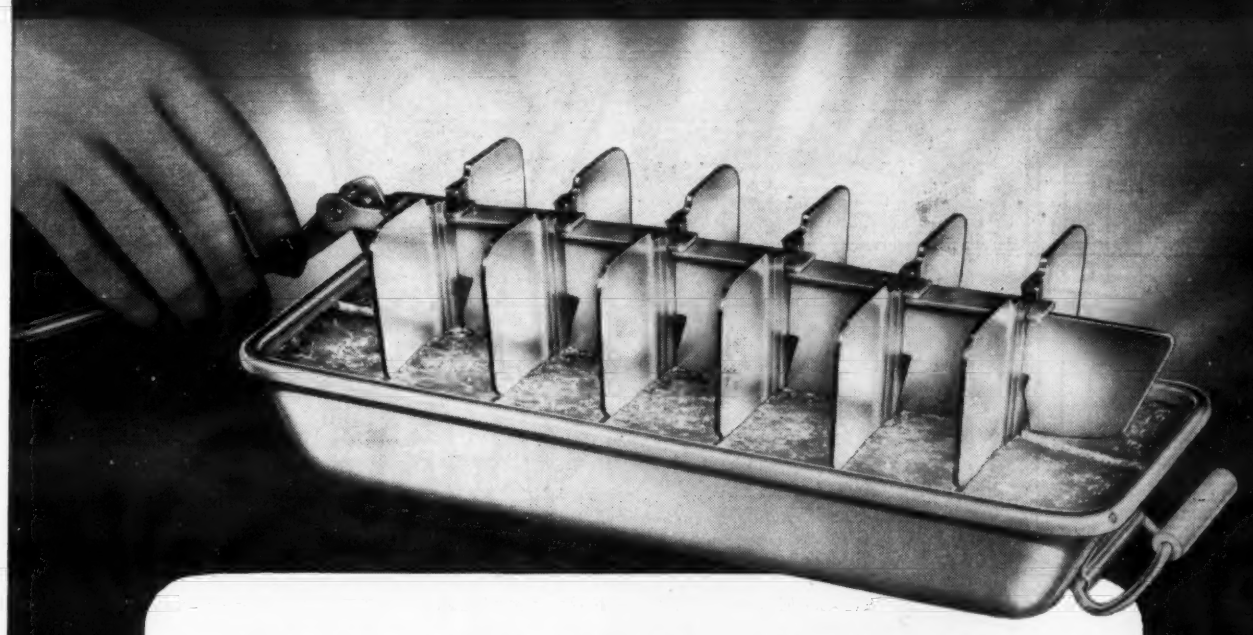
JOHN LEES

DIVISION OF The SERRICK Corp., Muncie, Indiana, U. S. A.

THE PERFECT ICE TRAY COMBINATION

PLASTIC—For Eye Appeal!

METAL—For Fast Freezing!



The New INLAND Handi-Cube Tray

COLORFUL plastic grids in blue—as shown—green, pastel shades or clear plastic are available. Or standard aluminum grids can be supplied. Plastic or metal tray lifters are optional.

Another Inland first! Another step in the development of truly modern ice cube trays! Colorful pastel-tinted plastic grids now add striking new beauty to the outstanding efficiency and performance of the new fast freezing Inland Handi-Cube Tray.

And what efficiency! The metal pan assures rapid freezing. A slight pull on the pan lifter frees the tray from the freezing compartment. A simple lift of the lever releases dry ice cubes in a jiffy. And this remarkable mechanism is designed for durability as well as efficiency . . . gives long-lasting ice cube releasing service.

Never has such eye-arresting beauty, such performance, such durability, such speedy freezing, been available in a single ice cube tray. No wonder the new Inland Handi-Cube Tray is writing a new success story in ice cube tray sales. Get the full story by writing the . . .

INLAND MANUFACTURING DIVISION, *General Motors Corp., Dayton, Ohio*

FAST FREEZING QUICK RELEASING

ICE TRAYS BY INLAND MANUFACTURING

INLAND

They'll Do It Every Time . . . . By Jimmy Hatlo

THE LUNCHES SHE MAKES FOR HER BRIDGE CLUB LOOK LIKE THOSE ADS IN THE MAGAZINES—
ANOTHER HEN-PARTY TODAY, HEY?
JIMMY HATLO
Thanx to MRS. TED MATIKA. 4844 W. 95TH ST., INGLEWOOD, CALIF.
BUT WHAT SHE REGULARLY HEAVES INTO THE OLD MAN'S LUNCH-BOX IS SOMETHING ELSE AGAIN—
SORRY, DEAR, THERE'S NOTHING FOR DESSERT, BUT YOU CAN BUY A CRULLER OR SOMETHING AT THE PLANT—
BANG!
WHAP!
8-18
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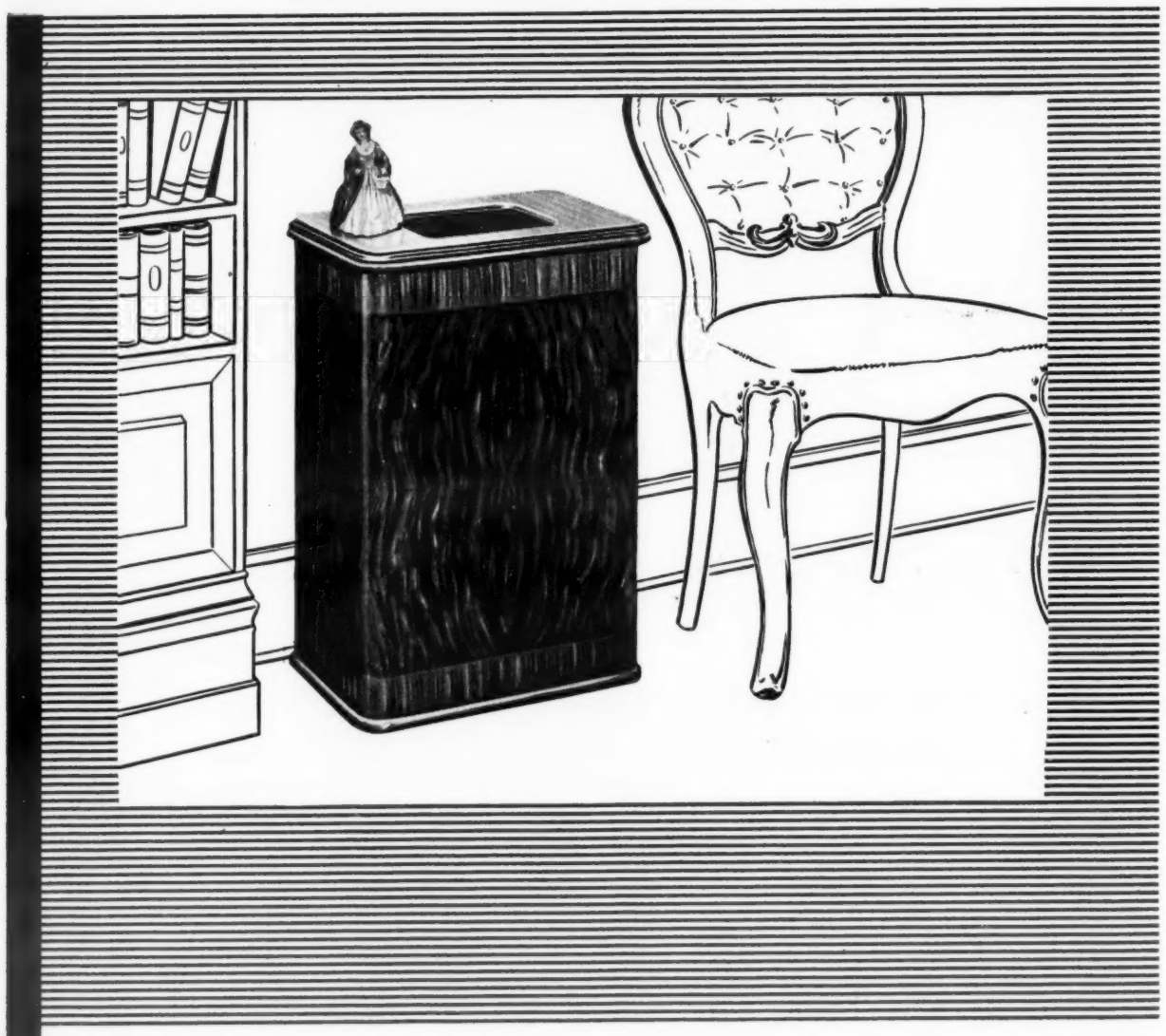
It's Time To SELL Again!



it's a must for winter comfort

The Carrier Humidifier is already keeping thousands of homes more livable in winter. And it's needed in every home where conventional heating dries out the air.

This handsome, efficient unit—smaller than a console radio—supplies *exactly* the right amount of moisture for comfort and health. It eliminates annoying rug static . . . keeps valuable furniture from loosening and cracking. And people can be comfortable at lower temperature.

Quiet and self-regulating, the Carrier Humidifier *pre-evaporates* moisture—no spray or water droplets to settle on walls or furniture. Its design is the result of Carrier's matchless experience and leadership in air conditioning.

These outstanding sales features of the Carrier Humidifier mean lively, profitable sales for you this winter. And that paves the way for increased sales of air conditioning units next spring and summer. Carrier Corporation, Syracuse, N. Y.

Carrier

air conditioning
refrigeration
industrial heating

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark registered U. S. Patent Office: Est. 1926

AIR CONDITIONING AND REFRIGERATION News

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F. M. COCKRELL, *Founder*

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Old Man Mose

ALL races of men have been superstitious. American Indians placated the rain-gods. The "children of Israel" burnt baby lambs. Elizabethan Englishmen threw salt over their right shoulders when black cats crossed their paths.

Even today, supposedly enlightened American businessmen consult fortune-tellers. That's right—you heard us the first time. Like "L'il Abner" in Al Capp's comic strip, we consult "Old Man Mose" in the hope of getting a few hints about what the future has in store for us.

We Americans worship charts, curves, and statistics, and we subscribe to "confidential letters." In the year 1945, a best-selling business book was entitled, "No Inflation Coming." Its author, a Major Anggass, "proved"—with statistics, charts, and curves—that prices were sure to drop, values disappear, and "hard times" reoccur. Nor was Major Anggass alone in his prophecy of impending doom. As a matter of fact, nearly all Washington and Wall Street "economists" predicted a Recession.

Millions of consumers and thousands of businessmen made wrong decisions after they had studied these "form sheets." They pulled in their horns, failed to expand their facilities, and cut inventories to the bone. And were they sorry!

Believing—wrongly, as it turned out—that "bad times" were just around the corner, they yelled for the American government to "do something." So it did. For example: Agricultural administrators kept the prices of potatoes and other foodstuffs at an artificial high level even when the latter had to be burned. All of us foot the bill for this sort of tinkering with supply-and-demand when we pay our income taxes.

Self-defeating pressure groups brought this anomaly about. In effect, they asked our government to control the weather—in the vain hope that the world's eating habits and agricultural crop prices would balance at "parity." In their superstitious bribing of the "rain gods," these pressure groups were merely following the bad example set by counterpart labor-union bosses who held down the prices of manufactured articles (by law) while they dictated government-pressured wage increases at the same time. Result: All of us are suffering an inflation which hurts everybody.

What's wrong with America today is that too many well-meaning "economists" and politicians have been playing ducks-and-drakes with our economic system. These "holier-than-thou" reformers are congenitally superstitious. They are sure that they can defy Nature—or stop the Clock of Time—with Laws.

Their reforms (which other citizens might not like, and which often do more harm than good) are sold to mesmerized legislators who have the instinctive feeling that they should placate the false God of Luck. How? By voting according to the results of "surveys" and so-called public-opinion polls. (The statistical sampling method, which is the foundation of all "surveys" is the Old Man Mose of our era.)

"Figures don't lie," the economic soothsayers will tell you, smugly—but all prevaricators can figure. Statistics and "surveys" can lie like hell, and often do. They can be twisted and turned and tortured to demonstrate what the statisticians and their paymasters want to "prove." Statisticians and pseudo-economists have been wrong so often that their pretenses at necromancy should never be taken at face-value by executives who manage business enterprises—or by Congressmen who steer the Ship of State.

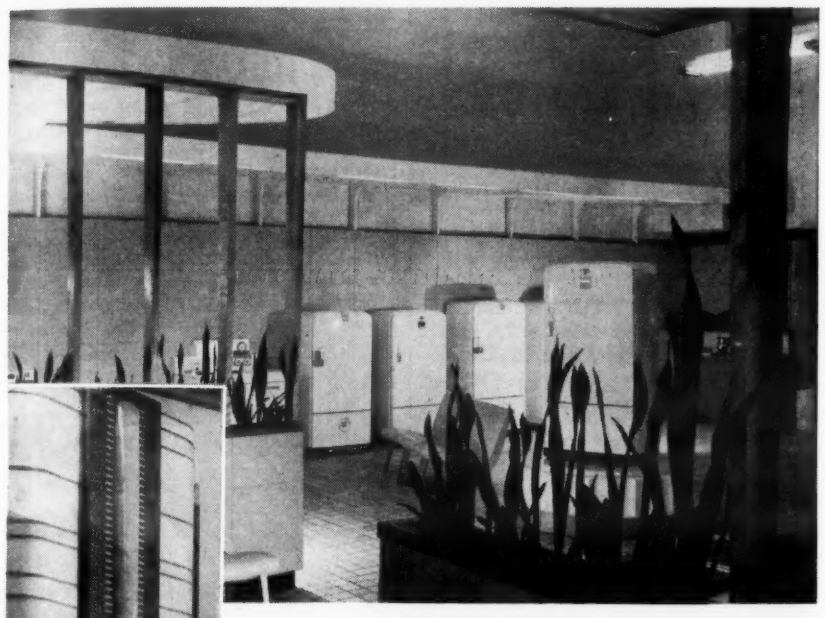
Our Times are too troubled and too uneasy for any of us to place our Present and Future in the laps of fortune-telling Charlatans. Let's make our own decisions, and base them upon the evidence we see in front of us. And let's quit running to Papa Washington for help when we're scared. Papa Washington too often lets tea-leaves-readers and phony astrologers guide ultra-important decisions and judgments.

It's high time that Old Man Mose be sealed up in his can—along with the radio oracles, the "confidential letter," and the statistical-sample worshipping "economists." No man alive today has access to the Book of the Future. That's why we should all make our own Predictions of Things to Come.

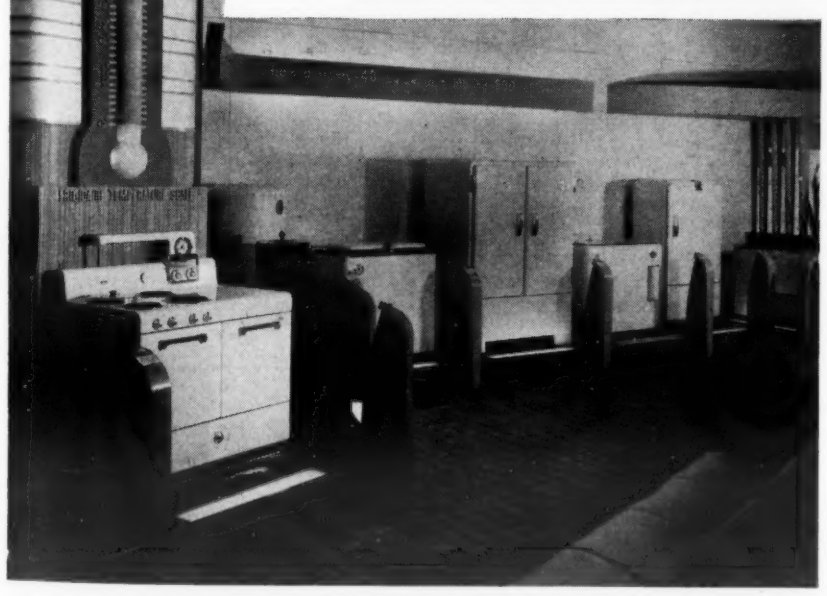
Displays Accent Appliance Temperatures

This Frigidaire-Delco division exhibit is now open in Detroit's General Motors building. Although few dealers could match its magnitude, the appliance exhibit offers pointers on arranging individual items.

In the kitchen display a gray-blue linoleum wall covering accents white refrigerator, range, and cabinets. Note sliding roller-door cabinet off breakfast nook.

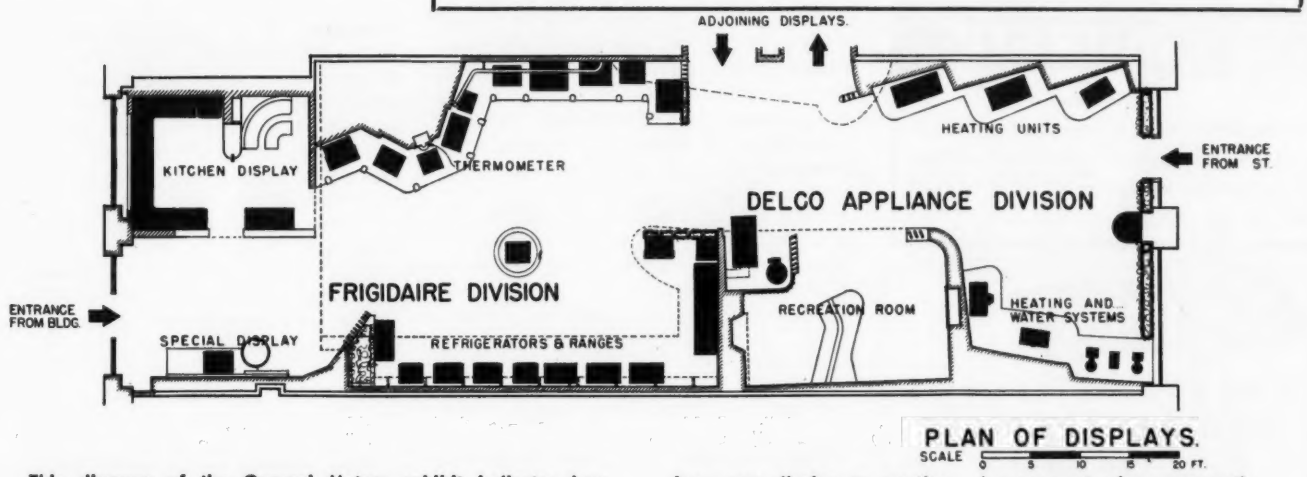


Canopy provides recessed lighting for this refrigerator exhibit. Background is in warm gray.



Giant plastic thermometer has push-button hook-up so that customer can see temperature range of individual appliances.

This entrance display is set against a warm gray background. Platform is finished in natural maple with lettering lacquered water-white.



This diagram of the General Motors exhibit indicates how the layout of the entire area subtly leads the visitor from one display to another. Arrangement gives mammoth thermometer dominant position.

Here Delco division heating units are set on individual linoleum-covered platforms equipped with footlights for each product. White, free-form panels on wall carry descriptive material in terra-cotta letters.

IN WIND, RAIN, SNOW OR HAIL • YOUR FREIGHT GETS THERE BY UNION PACIFIC RAIL!

Facts Favor Your Future in the "Union Pacific West"*

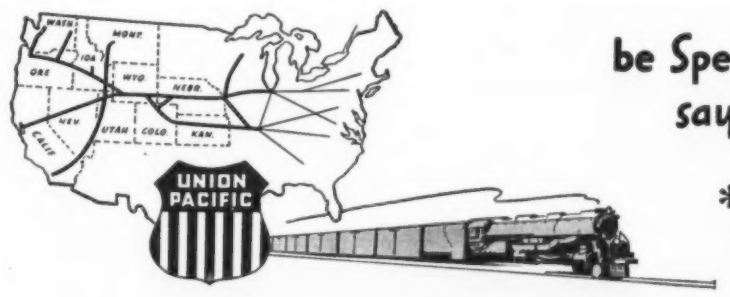
Of special interest to the Air Conditioning & Refrigeration Industry

Fact 1. Since V-J day, hundreds of industrial and commercial concerns have located factories, warehouses and distribution facilities on the Union Pacific right-of-way in the western states served by the railroad.

Fact 2. This vast territory is rich in raw materials, natural resources, skilled and unskilled workers . . . with ideal living conditions, good schools, and plenty of space for future expansion.

Fact 3. Travel surveys show vacationists favor the western area by a wide margin. Result—greater interest in the West leading to permanent residence . . . growing markets, more manpower for industry.

Fact 4. Over its strategic Middle Route, uniting the East with the West Coast, Union Pacific provides unexcelled rail transportation.



be Specific – say "Union Pacific"

* *Union Pacific will gladly furnish confidential information regarding available industrial sites having trackage facilities in the territory it serves. Address Industrial Dept., Union Pacific Railroad, Omaha 2, Nebr.*

UNION PACIFIC RAILROAD
The Strategic Middle Route

SPECIFY...
DRYERS THAT BEAR THIS LABEL
CHARGED DAVISON'S IN SILICA GEL OUT WITH
—the label that is your guarantee of maximum performance and satisfaction. Your jobber stocks it—for refilling and in factory charged dryers.

Superior
VALVES, FITTINGS and ACCESSORIES For All Refrigeration and Air Conditioning Systems
146
Superior Valve and Fittings Co.
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In the Heart of DETROIT
FACING GRAND CIRCUS PARK
The Tuller, a modern hotel for those who want the best! Convenient to Offices, Theaters, and Shops. Friendly, courteous service and real Hotel Comfort. The Tuller Coffee Shop or Cafeteria for your Dining Pleasure at modest prices. It pays to stay at Hotel Tuller.
VISIT OUR COCKTAIL LOUNGE
ONE OF DETROIT'S FINEST
800 ROOMS WITH BATH FROM $2.75
HOTEL TULLER
RICHARD C. HODGES, Mgr

Central Vermont Public Service Appoints Eaton Head of Combined Depts.

RUTLAND, Vt.—Albert A. Cree, president of Central Vermont Public Service Corp. with executive offices at Rutland, has announced the appointment of Chester B. Eaton as Director of Sales Promotion and Merchandising.

This position combines the duties previously assigned to the company's department of merchandise and residential sales under the late Alfred H. Allcott, and the former department of sales promotion and publicity.

Earl R. Pickford, formerly assistant sales manager, has been named Assistant Director of Merchandising.

The new combined department will be responsible for merchandise sales through the company's 14 stores in Vermont and western New Hampshire, and will direct all publicity and advertising for the company.

Bell-Hughes Moves To New Building

FRESNO, Calif. — Bell-Hughes & Knowles has recently moved into its new $60,000 building at 1497 Blackstone Ave. here, according to a company announcement.

In moving to the new building Hughes, partner of the firm, said that the company had combined its refrigeration and air conditioning business with the R. D. Knowles sheet metal shop.

Charles G. Bell and Hughes both started in the refrigeration field in 1927; the two formed a partnership in 1943.

Stewart Catalog Has Data On Ventilating Equipment

BLOOMFIELD, N. J. — Stewart Mfg. Co., Inc. here, manufacturer of high velocity outlets, scoopaires, and wall and baseboard registers, has just issued its catalog No. 48.

Coordinating technical and price data for the convenient reference of architects, engineers, and contractors, this catalog also serves as a source of information for consultants and those in the air conditioning, heating, and ventilating field. Diagrams and illustrations, with detailed specifications and supplementary materials for each type and size are included.

Operator DOES Something About Helping Locker Men, Freezer Dealers Cooperate

FLINT, Mich.—Home freezer dealers and locker plant operators ought to stop knocking one another and start cooperating, Edward R. Kapp, Jr., and Lester R. Sauter, co-owners of Froz-N-Fresh Food Lockers here, believe.

What's more, they have taken the initiative in spreading this conviction locally.

Disturbed over misinformation about locker plants and home freezers which they say some salesmen have given out to their freezer prospects, the pair presented their case recently to members of the local Appliance and Radio Dealers Association at a regular meeting.

They argued that dealers can promote freezer sales by pointing out to prospects the processing services locker plants have to offer the freezer owner. They proposed that locker plants and home freezers complement one another rather than compete.

Although the association came to no definite agreement on the matter of cooperation, some members expressed approval. One of them, Forrest W. Boswell, of Boswell Maytag Co., followed through by publishing a 20-inch advertisement in the local newspaper the next day promoting locker plant processing services. It read in part:

"Deer hunters! What will you do with your deer when you bring it home? Here's the answer—

"First—Take your deer to your favorite public food locker plant where they will cut it as you want it; then wrap it and freeze it. Second—Then you can put the packaged parcels in your home food freezer where you have it handy when you want some deer meat.

"If you do not have a home freezer, we can supply you."

This is the type of promotion that Kapp and Sauter believe will work to the benefit of dealer, locker operator, and consumer alike. They definitely intend to seek more of the same.

Another move has been to invite freezer dealers to visit their plant and even hold a meeting there. They said they are more than willing to show dealers just how the plant is operated.

Though the locker plant handles the Frostmaster line, the two said they would gladly give up home freezer merchandising if dealers should require it as a condition to cooperation.

Their efforts to get dealers and operators to work together are part of a widespread educational campaign they have been conducting ever since their locker business got under way a year and a half ago.

This program includes inviting high school home economics classes and Boy and Girl Scout groups to tour the plant. As a means of introducing the food freezing idea to young people, this plan has worked well in the past and will be continued for an indefinite period of time, Kapp indicated.

The Froz-N-Fresh plant is one of three in this industrial city of 178,000 population. Its existence is due in part to the World War II experiences of Kapp.

As a sanitation officer in the Navy, he was amazed and concerned, he said, over the amount of food wasted through lack of proper refrigeration. He determined then and there to do something about it when he returned to civilian life.

So, in the spring of 1946, he teamed up with Sauter, an old friend who had been a superintendent in an A & P warehouse for 12 years. The result was the present plant of 1,200 lockers located on E. Dartmouth St.

DEER HUNTERS!
WHAT WILL YOU DO WITH YOUR DEER WHEN YOU BRING IT HOME?
HERE'S THE ANSWER—
FIRST—TAKE YOUR DEER TO YOUR FAVORITE PUBLIC FOOD LOCKER PLANT WHERE THEY WILL CUT IT AS YOU WANT IT; THEN WRAP IT AND FREEZE IT. SECOND—THEN YOU CAN PUT THE PACKAGED PARCELS IN YOUR HOME FOOD FREEZER WHERE YOU HAVE IT HANDY WHEN YOU WANT TO USE SOME DEER MEAT.
IF YOU DO NOT HAVE A HOME FREEZER, WE CAN SUPPLY YOU. WE SELL ONLY NATIONALLY KNOWN MAKES, HOTPOINT, NORGE, MAYTAG, CROSLEY, QUICFREZ, CARL CRAFT and ORLEY. SIZES 3, 4, 6, 8, 12, 16 AND 25 CUBIC FEET. PRICED $159.75 AND UP.
Free Parking
BOSWELL MAYTAG CO.
1527 N. SAGINAW
Buy On Your Own Terms

This 20-inch advertisement, inserted by a cooperating dealer, appeared in one of the Flint newspapers.

Wilson Refrigeration Appoints Neuhard Factory Representative

SMYRNA, Del.—Wilson Refrigeration, Inc., has appointed William F. Neuhard of Pottsgrove, Pa., factory representative covering 20 counties in northeastern Pennsylvania, reports A. A. Davis, vice president and general sales manager.

W. F. Neuhard

Neuhard will expand the distributor-dealer setup in that territory for the full line of Wilson home and farm freezers, milk coolers, and commercial refrigeration products. He formerly was with Wilson Cabinet Co.

D. C. McKinley Named To G-E Sales Mgr. Post In New York District

BLOOMFIELD, N. J.—D. C. McKinley has been placed in charge of sales of General Electric air conditioning and refrigeration equipment in the New York District, L. T. Brockbank, district manager, has announced.

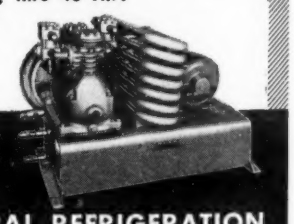
D. C. McKinley

Prior to his present assignment, McKinley served the G-E Air Conditioning Department as western manager in charge of sales to manufacturers of refrigeration equipment.

Joining G-E in 1930, McKinley two years later became one of the original group who formed the Air Conditioning Department. He was transferred to sales work in the Chicago area in 1936, and concentrated on the promotion of sales to manufacturers until his appointment as western manager in 1946.

REGIONAL SALES MANAGER
Large, nationally known commercial frozen food equipment and Ice Cream Cabinet manufacturer has openings in Washington, D. C., Texas, Pittsburgh, Detroit and Minneapolis territories.
Must be familiar with Refrigeration or Ice Cream or Frozen Food fields. Substantial drawing account against liberal commission with bonus arrangement. Real opportunity for right man. Send resume of qualifications and experience. All replies strictly confidential.
Box ACN. 714,
Equity 113 West 42nd St., New York City 18

Lipman
AUTOMATIC REFRIGERATION
For year-in and year-out DEPENDABILITY, LIPMAN refrigeration is second to none. Low cost of operation and maintenance assures repeat sales which mean greater profits. Units available in sizes from ¼ thru 40 H.P.



GENERAL REFRIGERATION
DIVISION
YATES AMERICAN MACHINE CO., Beloit, Wisconsin

Gloekler
Model 3 ADF
30 Cubic Foot
Model 3 ADI Ice Cube Maker Also Available

Model 2 FDI
25 Cubic Foot
Model 2 FDF (Blower) Also Available
With or Without Condensing Units
Gloekler REFRIGERATOR COMPANY
ERIE • PENNSYLVANIA

J. B. Legler Is Dearborn Motors Service Mgr.

DETROIT—Appointment of Joseph B. Legler, former General Motors and Nash-Kelvinator service and sales executive, as national service manager of Dearborn Motors Corp., has been announced by Merritt D. Hill, general sales manager.

Legler will direct service sales and training activities for Dearborn's distributors and dealers in the United States, Canada, Alaska, Hawaii, Mexico, and Cuba.

For the past seven years Legler had been with the Kelvinator division of Nash-Kelvinator.

AIRO has the LEADERS
We carry the preferred types of
CONTROLS
CUTLER-HAMMER • DETROIT
PENN • MINNEAPOLIS-HONEYWELL
RANCO • WHITE-RODGERS
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UNITS—PARTS—TOOLS—SUPPLIES
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For wholesale trade only
Please write on your letterhead or include proper identification.
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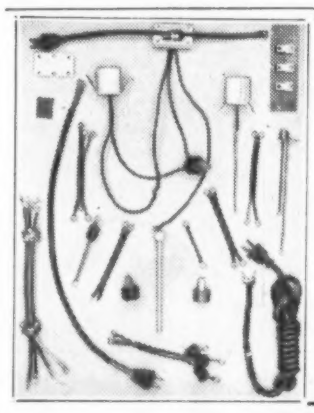

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ELECTRICAL WIRING HARNESSES AND DEVICES FOR
REFRIGERATORS ELECTRIC RANGES
WASH MACHINES APPLIANCES
AUTOMOBILES RADIOS
Insulated wire cut and stripped to your specifications, cord sets, heater cords and extension cords. Send us your print or sample. Free Engineering Service.
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TELLING and SELLING

A GUIDE TO SMART ADVERTISING AND MERCHANDISING PRACTICES

This series of articles comprising ideas and principles for the small retail or manufacturing business is written by James D. Woolf, who was for more than 20 years a vice president and director of J. Walter Thompson Co., one of the largest advertising agencies. Out of his experience embracing all types of advertising and merchandising he brings his counsel to the small businessman who must plan his own advertising and promotional efforts.

By James D. Woolf

How Hard Are You Trying?

A famous Harvard psychologist, the late Hugo Munsterberg, once charged that most people never call into play more than a fraction of their brains. William James, another noted Harvard philosopher, dittoed that with the assertion that most men possess large amounts of resource and energy they never use.

A striking example of this is seen in the way most average small businesses handle their advertising. They don't half try. No, they don't one-tenth try. They don't use a fraction of their think-power and their imagination and their energy.

Advertising could do wonderful things for their businesses. But often it doesn't. And the reason it doesn't is that these business men are too lackadaisical and unenterprising, or think they are too busy (doing something less important), or they are just not hep to how effective advertising can really be.

One of the most vital words in business is "HUSTLE." Advertising, used rightly, is a *hustling* force. Used wrongly, it is comparable to the lazy salesman who sneaks off to the ball game when he ought to be making calls.

I hope I may be excused for talking mostly about my own experience in what follows. It seems to be the best way to get over what I want to say.

Before I unwind, let me first define the term "advertising" as I use it here. I say that it is the primary job of advertising to *sell.* Advertising in its real role is not "reminder-ship"—not "publicity"—not "good will building"—not gratuitous public "entertainment."

Its Number One function is that of selling goods or services, *speedily* and *cheaply.* This is especially true in the case of local businesses—not only retail stores, but service businesses such as banks, garages, gas stations, hotels, inns, tourist camps, restaurants, cold storage lockers, public utilities, and so on.

Any medium or device that *sells* is advertising—newspapers, radio, outdoor signs and posters, form letters, telephone calls, handbills, door-to-door solicitation, window and counter display, any vehicle that conveys selling messages to people.

HERE IS MY INDICTMENT

Now here is my indictment: Three years ago my family and I moved from Winnetka, Ill., to Sante Fe, N. M. Two years ago I built a house at a cost of $26,000. Notice of my building permit was published in the local paper, so it was generally known the house was going up. I acted as my own contractor.

Over the building period of nearly a year *not a single dealer of any kind asked for my business.* There are seven lumber companies here. Did any of them—even one of them—write me a letter, or phone me, or call at my door, seeking business? The answer is no.

BELIEVE IT OR NOT!

There are seven stores here that deal in hardware. Did a single one of them even so much as send me a multigraphed letter? Not at all.

There are three electrical contracting firms. Did they bother to phone me to find out what was cooking? Again the answer is no. And yet my combined expenditure for hardware, plumbing, and electric wiring and fixtures was $2,400.

Seven stores deal in furniture, and at least a half-dozen others handle rugs and carpets. Did even one of these go-getters use any device of advertising to get my business? Nope, not one.

I spent $800 putting in a lawn and flowers. Did even one landscape architect, or nurseryman, or florist, spend even a penny for a postcard inviting my patronage? No, again.

NOT ONE PHONE CALL

I have a big family. Since we have been in the new house one daughter has been married, another daughter has blessed us with a grandchild, and a son has graduated from high school. All of these events were duly announced in the local paper. There are 11 photographers in town, and here was a chance to hustle up some business. Not a letter, not a phone call, not a flicker of a sign of any kind that one of these "hustlers" was interested. And not a flicker from the several stationers here.

We have had many house guests, Santa Fe being the tourist attraction that it is. Not once have we had a piece of advertising from a hotel, inn, dude ranch, tourist camp or motel, restaurant or roadhouse. I could go on, but to continue would be repetitious.

SCARCITIES NO ALIBI

It might be argued that, because of postwar scarcities, dealers had all the business they wanted. That's partially true, but I am convinced that the same lethargy prevailed before the war. Listen to this:

I had precisely the same experience in Winnetka during the Hoover-Roosevelt depression era. Winnetka is a suburban town on the northern outskirts of Chicago, and I built a house there that resulted in an outlay of some $40,000.

Although retailers and dealers of all sorts were desperate for business, we might as well have been living on a South Sea island. I'll burden you with only one example:

There were 13 retail furniture stores in that immediate suburban area, and we had 11 rooms to furnish, *but not a single store attempted to reach us with any form of direct personalized advertising.*

TRY SELECTIVE SHARPSHOOTING

I am a stout believer in the power of local newspaper and radio advertising. When it is done *right,* that is. *Right* means copy that is packed with information. There is selling power in facts.

But such advertising should be backed up with *selective sharpshooting.* That means *personalized* messages aimed at specific persons who seem to be in the market for what you have to sell. That means—*HUSTLE!*

Make Uncle Sam your salesman. For a penny and a half he will deliver a letter (mimeographed or multigraphed), or a printed circular, right to the doors of selected homes which are likely prospects for your merchandise.

And make your telephone your salesman, too. Don't be afraid to let people know you want their

patronage; they won't be offended, may even be flattered.

I know a woman in Ohio who has cornered the market on baby sitting in a city of over 300,000 population. A large staff of baby sitters is on her payroll, and she has a big, well-established business. And yet she is partially paralyzed, confined to her home in a wheelchair.

With letters and a telephone she has done a swell job. *Hustling* with advertising is the answer.

Selling opportunities for the man who hustles are almost limitless. Call into play a little more of your think-power and imagination and energy—and watch your business grow.

THOUGHTS FOR MERCHANDISERS

"Brunner makes a mighty fine unit"

This is the type of sincere compliment you hear in the trade...the direct result of Brunner's years of experience in application...continual advancements in design and construction.

Today, refrigeration condensing units are measured by the standards set by Brunner. Now available are models ranging from ¼ to 25 horsepower in air or water-cooled types adaptable to just about every domestic, commercial and industrial application.

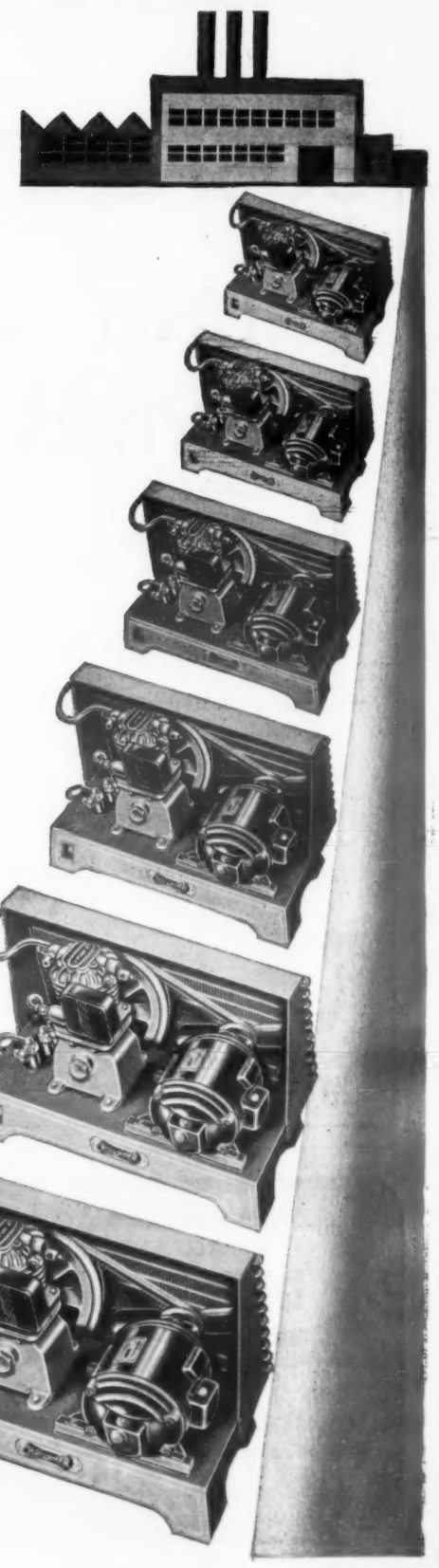
Present customers are the first to say that anyone concerned in the sale, installation or use of condensing units can ill afford to overlook the advanced features that Brunner can contribute toward dependable, economical, low-maintenance refrigeration.

For your convenience, Brunner direct factory representatives are located throughout the United States. Write us for the nearest address.

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.

BRUNNER
SINCE 1906

REFRIGERATION
helps you serve better



AIR AND WATER COOLED MODELS
¼ HP. TO 25 HP.

BRUNNER
SINCE 1906

Everfrost
SODA FOUNTAIN EQUIPMENT

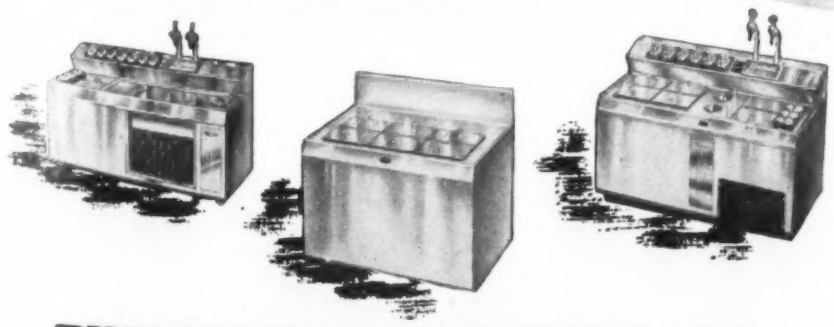
A BALANCED LINE

Fountain dealers everywhere are finding the Everfrost "balanced line" a real profit maker.

Two and three sink Bobtails . . . soda fountains with or without sink sections . . . fountainettes . . . remote or completely self-contained with condensing unit and refrigerated carbonator and water cooler.

With the Everfrost "balanced line" you will be able to furnish a specific unit to fill the requirements for each type of fountain installation. Small or large there is an Everfrost unit built to do the job.

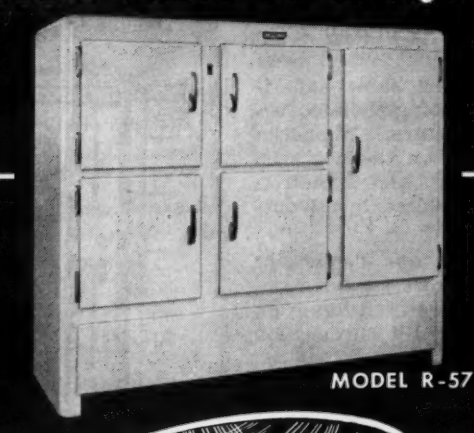
Investigate the advantages offered by an Everfrost franchise today. Write or wire us for complete information at once.



ANDERSON & WAGNER INC.
8701 South Mettler Street • Los Angeles 3, Calif.

FOGEL
PHILADELPHIA, PA.

The FOGEL "Reach-In" Refrigerator



MODEL R-57

"BALANCE"

Perfect balance is as important in refrigeration as it is on the high wire. *Every* FOGEL "Reach-In" Refrigerator has *perfectly balanced* refrigeration that guarantees years of dependable, uninterrupted service. Their streamlined, *space-saving* design make them a natural seller.

Styled for beauty, FOGEL "Reach-Ins" also bring your customers such outstanding advantages as:

- The FOGEL *EXCLUSIVE* "Pull-Out-Base" (entire unit on *all* "Reach-Ins" is easily pulled out for quick servicing).
- FOGEL—Armstrong One-Piece Insulation (will not crack, crumble, or settle. Non organic and vermin proof).
- All-Steel Welded Construction with heavy duty, chromium plated hardware.

Increase *YOUR* profits with the FOGEL "Reach-In" Refrigerator line. Feel welcome to write for further information concerning these, or other, FOGEL Quality-Engineered refrigeration items.

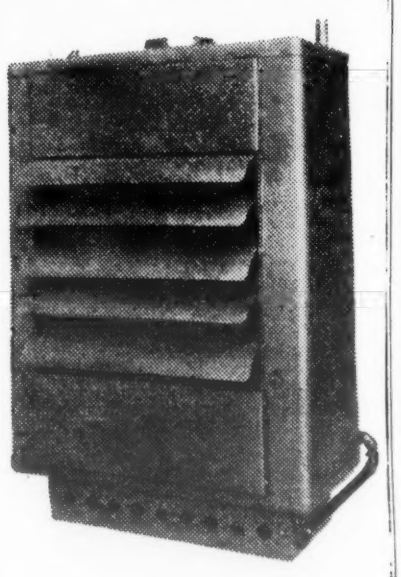
Now Available in Three Sizes
(20 cu. ft.; 38 cu. ft.; and 57 cu. ft.)

One franchise gives you a complete commercial refrigeration line.

FOGEL REFRIGERATOR COMPANY
5400 EADOM STREET • PHILADELPHIA 37, PA.

Quality manufacturers, for almost one-half century, of Display Cases, Reach-Ins, Walk-Ins, and Freezers.

SUSPENDED GAS UNIT HEATERS



85,000—125,000—165,000 BTU capacity. Delivery within 3 or 4 days.

This is a union manufactured Product.

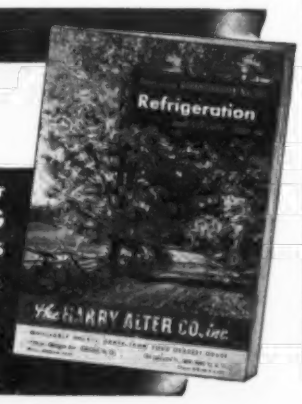
Some exclusive territories are available.

We also manufacture a combination heating and cooling unit, gas fired furnace and the NAT "Self-Contained" Air conditioning unit.

THE **NAT** CORPORATION

2710 McGee Trafficway Kansas City 8, Mo.

GET THIS NEW
FALL AND WINTER
DEPENDABOOK NO. 145



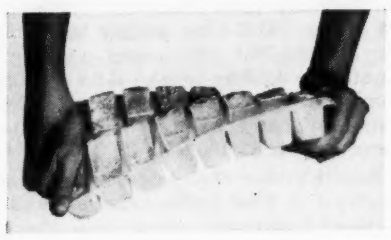
It's brand new, it's America's finest source for REFRIGERATION, AIR CONDITIONING and ELECTRIC MOTOR Parts and Supplies

Your copy is waiting for you. Write on YOUR letterhead, today to

THE HARRY ALTER CO., INC.

1728 S. Michigan Ave., Chicago 16, Illinois
134 Lafayette Street New York 13, New York

What's New



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'Eskotray' Ejects Cubes At 'Twist of the Wrist'

CHICAGO — Associated Plastic Co.'s, Inc. here is marketing a plastic ice cube tray under the name "Eskotray," which the company claims will eject ice cubes "at the twist of the wrist."

The tray, which retails for $1.69 or three for $5.00, is claimed not to stick to refrigerator or fingers, or is it in any way toxic. Odorless and tasteless, the Eskotray will, it is expained, release one or more cubes at a time. No hot water or waiting for the cubes to melt is necessary.

Trays are packed one or two dozen to a carton, with a one-dozen carton weighing approximately nine pounds.

New Ebco Water Cooler Resists Acid, Corrosion

COLUMBUS, Ohio—A new industrial type water cooler, especially designed for locations where high ambient temperatures or extremely dusty or dirty conditions prevail, is being introduced by the Ebco Mfg. Co. here.

The new cooler, called the model OP-10W, is claimed to be the only water-cooled electric water cooler constructed especially to withstand rust, corrosion, and acid fumes.

This, according to the manufacturer, is accomplished by preventing interior condensation and the admittance of acid fumes. The latter was brought about by constructing the cabinet of heavy gauge Bonderized and galvanized steel, insulating the top, and providing an air tight pressurized housing for the water-cooled condensing unit and other mechanical parts, he explained.

To dissipate heat from the condensing unit compartment, a sealed motor fan blows air over a finned tube coil circulating water that flows from the condenser, he stated.

Other mechanical features include a patented burst-proof device, a non-clog counter-flow pre-cooler; a 5-qt. cool water storage tank; and a hermetically sealed condensing unit.

The stainless steel top is of a splash-proof design and is provided with a non-clog drain. The bubbler has a self closing valve and is operated by a dial type lever.

The solid cabinet base is recessed to provide toe space.

Over-all dimensions of the cooler are: width, 15¼ in.; depth, 15½ in.; and height, 43⅝ in. It has a capacity of 10 gals. per hour or approximately 70 drinks per hour. It operates on a.c., 110 volt, 50-60 cycle, single phase current.

The unit is covered by a one year warranty.

* * *

Portable Electric Dryer Has 65 Different Uses

RACINE, Wis.—A new portable home electric dryer, the Race 65, which is claimed to have 65 different uses, has been introduced by the Racine Universal Motor Co. here.

The small dryer is said to supply a torrent of hot or cold air at the flick of two switches set in the handle. It measures only 7½ in. high, 6½ in. long, and 3 in. in diameter.

Among the uses to which the dryer may be put, according to the company, are defrosting a refrigerator and thawing frozen foods.

To operate, the dryer can be plugged into any convenient outlet supplying 110 to 120 volt a.c.-d.c. current. It is mounted on a removable base with keyhole slots to simplify wall attachment, the manufacturer said.

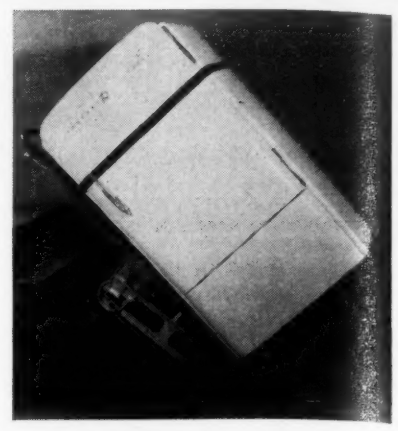
He claims that it is precision built from highest grade materials. A Racine Universal motor powers the unit.

The dryer is packaged in a durable container with cord handle that the housewife can use later for a sewing or knitting box, he declared. Retail price has been established at $13.95.

'Tank Tread' on Appliance Truck Can Climb Stairs

MILWAUKEE — The Holm's located at 2468 N. 19th St. here is marketing a truck for moving appliances and other heavy items up stairs and ramps with the minimum of effort for the worker.

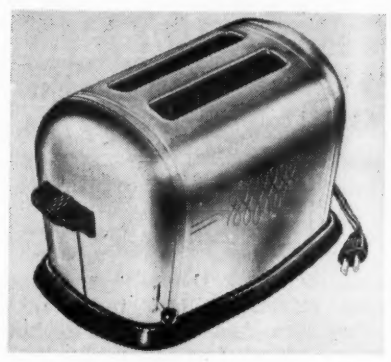
Called "Menne Crawler No. 1,000" the truck is equipped with a tank-style tread with a brake to allow the user to stop for a rest in the middle of a flight of stairs. The caterpillar type frame is just large enough to span three ordinary steps, according to the manufacturer, allowing for bump-proof movement up stairs.



The Holm's Appliance Truck

The dolly base of the truck is aluminum alloy. A tubular frame with a handle attached to the dolly carries the load. Weighing only 60 lbs., the crawler is said to be capable of handling 1,000 lbs. Company tests have indicated that all of the ordinary heavy items around the home can be handled by one man with the new truck, while two men can move a piano.

Leslie Co. Patents Crumb Tray on Pop-Up Toaster



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BROOKLYN—Leslie Electric Co., Inc. here has introduced a new pop-up toaster to market under the name "Press-To-Magic." The company says the appliance is equipped with a new timing device with a positive action adjusting lever to give perfect control.

Also featured is the patented crumb shaker tray, which allows the operator to empty crumbs from the toaster without tipping it up. Oven like construction is said to keep toast warm after popping. When in operation the toaster uses 800 watts, but this is automatically shut off when the toast is done; no current is consumed just because the plug is in the outlet, according to the manufacturer.

The unit, which operates on 115 volt a.c., is chrome finished and retails for $19.95, including all Federal taxes. Packaging is done one toaster to a carton and six to a master carton, weighing about 32 lbs.

CROWD-STOPPER

Sherer's self-serve dairy case is a "natural" for drawing the shopping crowds. Its large, easy-to-get-at display area sells more milk, butter, cheese, spreads . . . boosts sales and profits for food merchants.

SHERER REFRIGERATED MERCHANDISERS

SHERER-GILLETT CO.
Marshall, Michigan

What's Happened To the All-Year Gas Air Conditioning Systems?

Editor's Note: Just prior to the War, some new developments in all-year gas air conditioners made it seem likely that such equipment might cut a swath in the air conditioning market.

The following talk by a gas utility man before the A.G.A. convention tells something of what has happened to gas air conditioners since the war, and predicts some probable courses that this field may take in the future.

By Frank C. Smith, President,
Houston Natural Gas Corp., Houston, Tex.*

I have approached the preparation of this paper relating to the development and present status of the all-year gas air conditioning business with some relish and only one small gnawing doubt—that the industry may not be so thoroughly convinced of its tremendous value and importance as I am.

My entry into the gas utility business some 14 years ago coincided generally with the great change in the gas refrigerator from the water-cooled unit to the air-cooled unit. Since that time, some 2,500,000 gas refrigerators have gone on gas company lines and each consumes an annual average of about 132 therms.

Increase Not 'Hay'

If these are half on manufactured and half on natural gas lines, and the therms average 150 cu. ft., then the gas refrigerator has been the means of adding an annual delivery of 5 billion cu. ft. of gas at residential rates to the business of the existing gas utility industry. This increase in dollar volume is not "hay," by any comparative standard.

In these 14 years great changes have come about. The American standard of living, already the highest in the world, has continued steadily to go higher.

How far from the conditions of pre-war peace have we turned in this period of post-war uncertainties toward a new norm of living standards! The cost of living, as reflected in current prices, is far higher than at any point ever attained in America before. Some high prices are far out of joint, but it is generally agreed that, with certain such exceptions, the present high prices are not a peak, but a plateau, one on which we shall continue to move forward and eventually become accustomed to until a new economic cycle takes us up or down.

This progress toward newer and higher standards of material living has brought about a general acceptance, especially in the hot and humid climates of many portions of the United States, of the need for summer air conditioning at home and in business.

From the old expedient of air blown across melting ice, we have progressed to the precise control, through scientific methods, of temperature and humidity and the controlled circulation of such air in home, business house and industrial plant. The ready adaptability of the electric motor to drive the compressor, circulating a refrigerant through coils over which air was blown by a fan —the simplest form of mechanical air-cooling—has a long 'head' start on the summer air conditioning market, and early in the game seemed to preempt it; but again, as with the gas refrigerator, means to employ gas in summer air conditioning at the highest level were sought.

Years of experiment and research marked continued improvement toward the goal of perfection. Bryant, Servel, Surface Combustion, Williams, Mills— these, and perhaps others, poured out the dollars for scientific research and development.

The war period gave opportunity for continued testing and experiment without the pressure of haste for production. North and South, East and West, in varying climates, altitudes, and all conditions of normal weather, trial installations of various equipment were made, tested, changed, redesigned and re-tested and so on through the endless search for the perfect adaptation of gas-activated summer and winter air conditioning.

Status of Producers

In giving an account of this subject, I am speaking for and on behalf of no manufacturer. Information has been sought from all, and, where obtained, has been utilized here. What follows, however, are my own comments and do not constitute authorized announcements by any of the manufacturers named.

What do we find as to the outcome of the research and development work in this post-war year, and at this time of our meeting here?

So far as I can learn, Mills is out of the picture, having abandoned its research soon after the death of its consultant, the late Henry Loebell, that genius who contributed so much to the gas utility industry.

Williams: its Air-O-Matic manufacture was discontinued by the war and has not yet recommenced; but, in the meantime, general observation and testing of 2,500 tons capacity installed pre-war—practically all commercial installations of the steam absorption type—has continued.

They have designed for production a new 10-ton unit and expect to produce also a 15-ton unit, both for commercial and industrial application. They have an eye on the residential market, but no present plan for exploiting it.

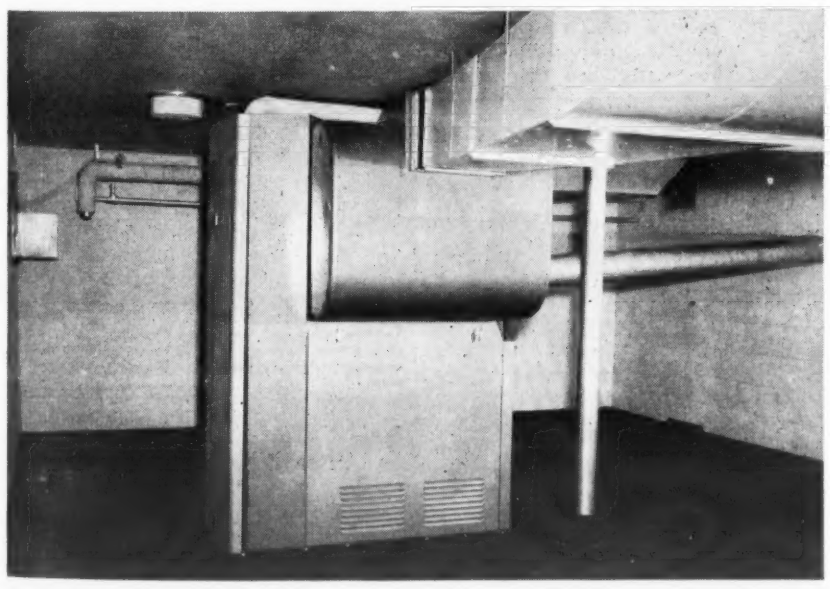
Bryant: the owners of the silica gel patents and processes have concluded that their Dehumidifier "is not too practical for residential comfort cooling when used alone"; however, it has been found satisfactory as an adjunct to refrigeration.

They feel their natural field to be in commercial applications in conjunction with refrigeration, especially in restaurants and theaters

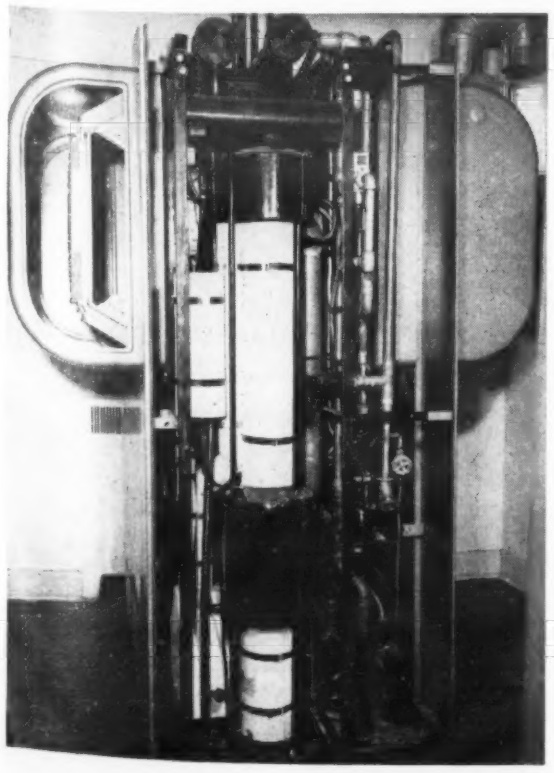
(Concluded on Page 20, Column 1)

*Before the Twenty-ninth Annual Convention, American Gas Association.

A 5-Ton Gas Air Conditioner Installation



Year-round air conditioning with gas as the primary fuel is provided by this Servel unit. This 5-ton model supplies warm, filtered air in winter, and during the summer, air cooled by means of a gas-operated absorption refrigeration machine. The duct at upper right is the main supply duct from the unit to the conditioned space. Note at right the horizontal flue running to the chimney.



Size of the 5-ton absorption unit in Servel's year-round gas-operated air conditioner is indicated above, which shows the machine after the main front panel and one side panel have been removed. Return air first passes through the filter at upper left and then through the cooling coil. The air conditioner is thermostatically controlled, but the switch from heating to cooling is done manually.

THE NEW
KEL-KOLD
REFRIGERATION
CONDENSING UNIT

Direct Drive Efficiency
No Seal Trouble
EQUIPPED WITH G. E.
Hermetic Sealed
Motors

Deliveries Immediate

DEALERS
DISTRIBUTORS
WANTED

PROTECTED
TERRITORY

¼—⅓ HP. Sizes
High and Low Temp.

Phone Write or Wire

PERCHAN & CO. 1640 East 65th St., Cleveland, Ohio

On the high road or low road . . .

YOU'LL HAUL WITH POWER!

CHEVROLET

Advance-Design

CHEVROLET TRUCKS

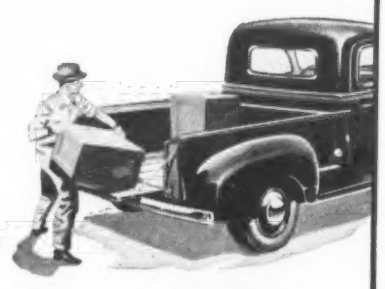
THE CAB THAT "BREATHES" . . . fresh air is drawn in from the outside —heated in cold weather—and used air is forced out!*

Here's "more power to you" on your hauling job—extra power to make "molehills" out of mountains and shorten the long level stretches. It's the famous Valve-in-Head Load-Master Engine in the new Chevrolet Advance-Design trucks. See these trucks of tomorrow—today! They're "loaded" with new features and innovations!

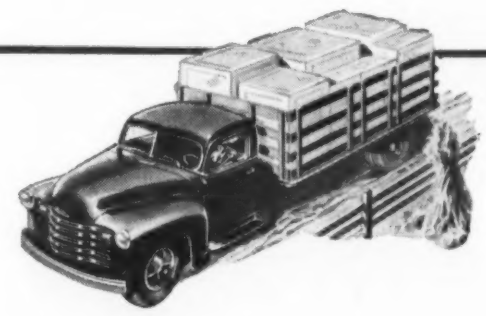
**Fresh-air heating and ventilating system optional at extra cost.*

CHOOSE CHEVROLET TRUCKS FOR TRANSPORTATION UNLIMITED!

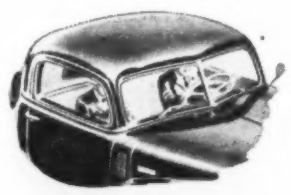
CHEVROLET MOTOR DIVISION
General Motors Corporation
DETROIT 2, MICHIGAN



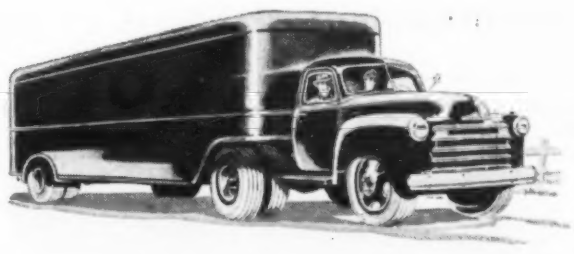
Panels and pick-ups have **INCREASED LOAD SPACE** —stake and high rack bodies **MORE EFFICIENT LOADING.** . . . New, stronger, sturdier **FRAMES** are designed to carry greater loads greater distances for a longer time!



LONGER WHEELBASES give better load distribution. . . . Chevrolet's famous **FULL-FLOATING HYPOID REAR AXLES** are geared for the load!



The cab is **FLEXI-MOUNTED**—cushioned on rubber against road shocks, torsion and vibration! . . . **DRIVER'S COMPARTMENT** is wider, with more leg room. The seats are fully adjustable, bigger and more comfortable. Wider, deeper **WINDSHIELD** and **WINDOWS** increase visibility by 22%!



Chevrolet **VALVE-IN-HEAD TRUCK ENGINES** are world's most economical for their size. . . . There are **HYDRAULIC TRUCK BRAKES,** *exclusively* designed for greater brake-lining contact—for positive action!

What Has Been Happening with the All-Year Gas Air Conditioner?

(Concluded from preceding page)

with high latent cooling and moisture-removal requirements.

This manufacturer is developing heavy-duty equipment with industrial drying processes, and believes that there it has an expanding market. Bryant expects its equipment to be the means of developing substantial gas load in this field.

Surface Combustion: there has been, and is continuing, development of the Kathabar unit, which features automatic humidity and temperature control.

Their approach toward air conditioning tends toward "freshness" for comfort, rather than wide differential in air temperature. More accurately, their theory is that a low-temperature room with high humidity is much more uncomfortable than a low-humidity room with a high temperature. Their method, therefore, is to provide equipment designed to maintain the proper ratio between moisture and temperature.

The Kathabar Unit

Kathabar home units are on test in various locations and, in our single experience, performing satisfactorily. The design is complete for production in 5-ton units, but these are not now available in volume.

This manufacturer has not indicated the date on which volume production will begin and sales and service organizations be effected. Unquestionably the product is soundly engineered and holds great promise for future service for our customers and load-building for our companies.

Surface Combustion takes the view, as quoted to me, that large-scale production of the home unit should await the time when its price and installation cost will not be so high as to put it in the luxury class, and that humidity control, an outstanding feature of its product, "is going to receive more attention than it has in the past."

And, further, that "the gas industry would be in its strongest position by going back to the fundamentals of air conditioning and emphasizing the benefits to be derived and the higher quality of air conditioning obtainable based primarily on the control of humidity with a minimum differential of temperature."

In my own city, Houston, commercial installations of Surface Combustion have been contracted for during this year in a large hotel and in office buildings now being constructed, aggregating 800 tons of refrigeration, with a gas load of 12,000,000 to 15,000,000 cu. ft. a month.

This manufacturer's standing as a maker of gas-burning equipment and its sane and comprehensive approach toward the subject of all-year gas air conditioning make certain the availability of serviceable and adequate home equipment with desirable load-building characteristics when the company deems the economic factors of production, sale, and installation propitious for business in volume. Their custom-built commercial and industrial equipment is available now.

I mention that Servel all-year gas air conditioning last because there is a good deal to be said about it, since it is at present the only unit in volume manufacture, with full-blown sales, promotion and service organizations paralleling the maker's nation-wide gas refrigerator organization and, on occasion, integrated with it.

History of Servel Unit

As far back as the Mid-Thirties—about the time gas refrigeration began to be called 'the fourth big job'—Servel began its search for a gas appliance that would produce new load for the gas industry just as its gas refrigerator had done. Laboratory research and experimentation were undertaken toward a gas-operated air conditioning unit, especially directed toward residential and small commercial application.

Promising results were attained. As "bugs" made their appearance, their cure was found; trial installations were made in various areas of the United States to achieve a wide variety of climatic conditions; and by the end of the Thirties the benefit of the careful and extensive development work found its expression in the "L" model, of which a number were manufactured, installed, and have given a good account of themselves.

Before the War, the "A" model appeared, with additional improvements of design and manufacture, and was "going good," though still in small number, when the war intervened and Servel's production changed from peacetime goods to many materials of war. During the war years, only enough material was utilized to keep the existing installations serviced.

In 1944, Servel announced that its part in the expanding economy of the free enterprise system of the United States would be a new, fully equipped plant devoted to volume production of its all-year gas air conditioner, the "C" model, now brought to the point approaching perfection already attained by its gas refrigerator. By a date early in 1947 the plant had been built, equipped, and volume production begun at a rate of 5,000 units per year, with a capacity of 10,000 units.

It must be emphasized that the Servel unit is a year-round air conditioner, built for comfort heating as well as comfort cooling.

The Load In Texas

On the Texas Gulf Coast, where I live and my company operates, the Servel unit uses 86.1% of the average total household load, and of that portion of gas it uses, 70% is consumed in the cooling season and comprises more than 60% of the total gas load. True, our weather is somewhat warmer than the average year round.

Boston, Mass., would seem to offer nearly the opposite extreme. There, where house-heating is 72% of the annual average residential gas load, the Servel air conditioner utilizes 90% of the gas consumption, with 18% used in summer cooling. That 18% is nearly twice as much as the range, refrigerator and water heater use the year round!

So it would seem that if these three commonplace household uses of gas are worth promoting and selling, the air conditioner should be worth it too, though the market be not so large.

Load Division In Washington

In Washington, D. C., the cooling load of the Servel unit is 26.5% of the total annual average consumption for all household gas uses, and, again more than twice as much as the refrigerator, range and water heater. In Pittsburgh, the cooling load is 22.9%—and, again, more than twice the three.

In Philadelphia, 24.2%; in Kansas City, 27.6%; in Cincinnati, 25%; in Chicago, 19.6%; and in Los Angeles, the annual average use for cooling is 54.4% of the entire household use of gas—more than house-heating and the other three put together!

In your mind's eye, you will see how this consumption appears in your graph of the year-round use in the home. Month after month, almost unchanging, is the steady floor of the base load; range, refrigerator, water heater.

In the first three or four months of the year the heating load is superimposed on the base load, the graph reaching highest in January, descending to the floor in April, then beginning again in October, higher still in November, and still higher in December. Your heating load—2900 therms in Boston, 2500 in Pittsburgh, 2100 in Kansas City, 741 in Houston, 672 in Los Angeles—affects in varying proportions the gas consumption of the first four or five months and the last three or four months of the calendar year. What about the four or five in between?

Without the air conditioner, the flat valley of minimum base load. With air conditioning, an increase of 20% of your load in Boston, of more than 100% in Los Angeles, and varying increases between, with no additional investment in plant, but year-round use of the facilities the gas utility already has. And, bear in mind that every therm of this increased sale is at the highest rate you charge for gas!

The Utility's Viewpoint

That's the Servel story—not all of it, but that's the load-building, load-factor story. In this day of 28 billion dollars in circulation, with new homes being built at an unprecedented rate, "It's a natural."

It looks as if the gas utility industry certainly would have leaped at the opportunity to take the full production of the Servel air conditioner plant and put these units to work building load. As a matter of fact, we render a very valuable service to the electric industry as we install gas air conditioners.

The revenue from electricity to operate air-circulating fans and cooling-tower pumps amounts to a large percentage of the revenue from gas consumption—perhaps as much as one-third. The electric load factors are ideal, as the current is carried by their standard lighting circuits.

But we are principally interested in the fact that the load factor of summer air conditioning is favorable for every gas company; in the South, the Southwest and the South Pacific Coast the summer volume far exceeds all other uses throughout the year, as I have shown by citing average installations; but it is no secret, I

(Concluded on Page 21, Column 1)

One of a series *of messages to help you increase your understanding of business paper advertising, and its effect on your business.*

Maybe "more production" isn't the answer to all our problems

AMERICAN INDUSTRY is already producing at almost double its pre-war rate. Yet with labor and material costs at an all-time high, the experts insist that we must produce still more goods, faster, more efficiently, if we are to avoid another boom-and-bust cycle.

We'll buy that—as far as it goes.

But let's never lose sight of the fact that production is only half the problem. Because for every increase in our rate of production, there must be a comparable rise in our *rate of sales.*

Actually, of course, there is no such thing as producing goods at a profit. Goods are *sold* at a profit—yes. And while production line savings are vitally important, it is of equal importance to keep down the cost of *manufacturing sales.*

That is the function of *mechanized selling*—to produce sales on a mass production basis, and at the lowest possible cost per unit. Translated into more familiar terms, it simply means advertising to the right market, in the right way, at the right time.

Like the machine on the production line, good advertising is a multiplier of men's efforts, for it enables us to produce (and *earn*) far more than we could alone. And when it goes to work in business papers — with their tremendous concentration of hand-picked readers—advertising becomes the most efficient machine at our disposal for *manufacturing sales at a profit.*

What are the ten ways to measure the results of your business paper advertising? You'll find the answers in a recent ABP folder, which we'll be glad to send you on request. Also, if you'd like reprints of this advertisement (or the entire series) to show to others in your organization, you may have them for the asking.

AIR CONDITIONING & REFRIGERATION NEWS

is one of the 129 members of The Associated Business Papers, whose chief purpose is to maintain the highest standards of editorial helpfulness—for the benefit of reader and advertiser alike.

DIRTY SERVICE CYLINDERS *cause trouble*

A DIRTY SERVICE CYLINDER WILL FOUL ANY REFRIGERANT

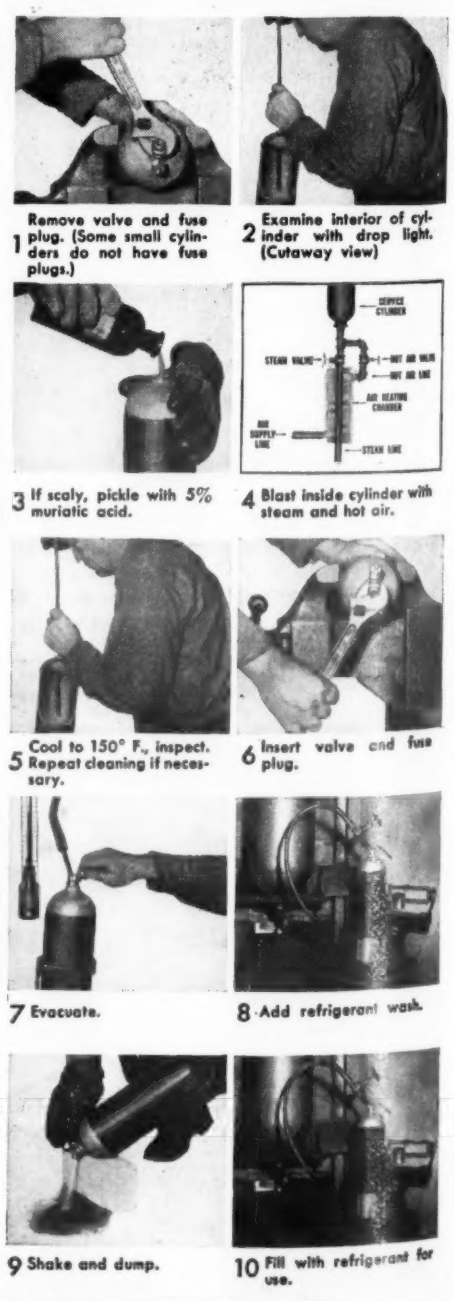
● The importance of clean service cylinders cannot be over-emphasized. Many service problems are definitely traced to dirty service cylinders. The only remedy is KEEP YOUR SERVICE CYLINDERS CLEAN.

Note the easy-to-follow method of cleaning service cylinders illustrated* and, if you wish additional information, or data on other service cylinder cleaning methods, read ANSUL Bulletin "KEEPING SERVICE CYLINDERS CLEAN."

*** If you do not have your own service cylinder cleaning facilities ANSUL provides this service for you at a nominal cost. In addition, if requested, ANSUL will make the required periodic I.C.C. pressure test for you.**

ANSUL WHOLESALERS are ready and equipped to render an intelligent, co-operative service to refrigeration engineers and maintenance men on problems which arise from time-to-time in the operation of refrigerating systems.

*REG. U. S. PAT. OFF.


1 Remove valve and fuse plug. (Some small cylinders do not have fuse plugs.)
2 Examine interior of cylinder with drop light. (Cutaway view)
3 If scaly, pickle with 5% muriatic acid.
4 Blast inside cylinder with steam and hot air.
5 Cool to 150° F., inspect. Repeat cleaning if necessary.
6 Insert valve and fuse plug.
7 Evacuate.
8 Add refrigerant vapor.
9 Shake and dump.
10 Fill with refrigerant for use.

ANSUL REFRIGERANTS ARE AVAILABLE AT LEADING WHOLESALERS EVERYWHERE.

ANSUL CHEMICAL COMPANY
REFRIGERATION DIVISION, MARINETTE, WISCONSIN
DISTRIBUTORS FOR KINETIC'S "FREON-11," "FREON-12," "FREON-21," "FREON-22" AND "FREON-113"

Varied Problems Confront Merchandiser of Gas All-Year Air Conditioner At Present

(Concluded from Page 20, Column 5)

presume, that the demand upon the Servel plant for production of these units has been nowhere nearly commensurate with its ability to deliver.

If I were newer in the gas industry I would say that there is something wrong, but there are reasons—some good, and others less valid—for this situation, which I dare say, will cost this manufacturer dear unless it is overcome in one way or another.

Restrictions a Problem

For one thing, the year-round air conditioner was met head-on, in the territory of 70% of the gas connections of the United States, by restrictions on gas for replacing other fuels for heating in existing construction and for furnishing heat in new construction. That was a body blow.

Not a single new home in this area could have gas heating—an essential part of gas all-year air conditioning—and in only the existing construction where gas was already the heating agent, could the unit be installed. This was, and is, a terrific set-back, but even at that, in the restricted area, there were sold and installed 30% of the units sold to Aug. 1, 1947, proving that there was, and is, a market, however thin, and that some gas utilities took advantage of it.

As for the rest of us, we haven't much to be proud of. Some utilities in the hottest, most humid sections of the South and Southwest, have not seen fit to promote the sale and installation of this load-builder. I do not know whether the deliberation or inertia of some is due to a conflicting interest in the sale of electricity, and I make no such charge, but this I can tell you—that this indifference or inertia is going to allow electric motor-driven compressors to do the jobs that gas would be doing if our industry were on its toes.

What About the Price?

I have heard this talk about the high price—the advancing price of the unit. Of course the advance in its cost is but a small part of the increased cost of the installed job—anybody who hires sheet-metal workers these days should know.

But what if it is high? What isn't—except gas rates? It is a job of selling—not a product at a price—but comfort, health, cleanliness, prestige, security, and insurance against obsolescence.

The cost of bathrooms is going up, too, and plumbing and tile work; but houses are being equipped with bathrooms which are used by their owners less than 5% of the time an all-year gas air conditioner serves its owners.

Just don't try to tell me it can't be sold; we are selling it; Lone Star is selling it; New Orleans Public Service is selling it—but we are not doing the job any too well either, considering our sales potential and comparing it to the sales made to existing construction in restricted territory.

The moral of this story is this: industrial, commercial, and residential air conditioning with gas offers the gas utility industry another available and desirable means of public service and building the gas load. Approaches to the design and construction of such equipment have been broad, deliberate, scientific, and practical.

Humidity and temperature control are practicable and economically desirable through several avenues. Highgrade equipment has been brought, through testing, redesigning, and improvement, to the point of production by many manufacturers.

One sort of equipment and its operation will suit a given situation better than another. There are various sizes and types of absorption refrigeration, direct dehydration, and, in the larger installations, steam turbine-driven compressors.

Gas all-year equipment has provided a new concept of air conditioning service—it is unique in its field. It offers unlimited heating capacity as well as adequate cooling, with the quiet operation and long-life expectancy of that other superb appliance the gas refrigerator.

Its load factor is ideal, and it gives a new experience in air conditioning quality—temperature and humidity control, both built in. Its operating cost is attractive; with the Servel unit, 50 cents per m.c.f. of 1,000 B.t.u. gas is equivalent to 1 cent per kilowatt-hour of electricity.

With aggressive promotion and sales effort, properly organized, the residential and commercial market, as well as the big industrial market, can be entered with success. Local advertising as well as national will bring desirable prospects and sow seed in fertile ground. Every homeowner and home-builder would like to have all-year air conditioning, and he can be sold on gas equipment if you people are "on the beam."

Who To Sell & Install It?

And this final point—who is to sell it? Install it? Service it?

With that hurdle before them, some gas utilities have turned aside, refused the jump, and now stand grazing in the quiet and peaceful pasture where they may nibble without the disturbing element of new business solicitation—harnessed by precedent and dreading the jump into new fields, however appealing and nourishing.

Of course, the gas utility has to sell it, install it, and service it—to the point of customer acceptance, when you may, if you wish, turn it over to some active and aggressive contractor or merchant-dealer. What else have we of the unrestricted territory got to do but build gas load?

My company sells no appliances at retail to anybody if we can get a dealer to do it, and I will be glad when we turn this load-builder, the all-year gas air conditioner of any make, over to a contractor or a merchant-dealer—and when we do, we will work just as hard with and for him as we do with and for 300 others now.

200 Jobs at a Profit

And if you are curious, it can be done without loss. My company's air conditioning department, organized entirely separately from any other promotion, sales, engineering or service department of our company, will close this year with more than 200 installations, with a profit. The gas load is pure velvet.

Don't tell me it can't be done. We are doing it! Don't tell me it can't build gas load. We are building it!

The air conditioning field has hardly been scratched, but the electric motor-driven compressor will plow it deep and gather the crop unless our industry gets "on the beam."

Of course, early progress will be slow; our installations this year should be 1% of our meters instead of .2%, but costs of building and prices of material and labor are going to level off some day, never to the pre-war levels we knew, but a standard will be established and home-building undertaken with confidence. Meantime, many commercial establishments, small and large, where air conditioning is not an investment in living but simply an item of investment in building business—these are prime prospects for gas all-year air conditioning.

Of course we have heard it said that in the presently restricted area gas is losing ground because new homes are using other fuels, and since the only gas-activated air conditioning unit now available in volume—Servel—embodies the gas-heating unit as a part of its year-round service, therefore the residential and commercial air conditioning market is going to non-gas units.

This is a tough situation to meet. I know the gas utilities in that area are biting their nails and "cussing" hard because they find themselves so "boxed-in."

Many Homes with Ductwork

Our day will come, of course—perhaps before another year. If you realize what this load means, as I have tried to show, you will be fighting to keep it where you already furnish gas for heating, and to add this ideal summer load in addition.

In our territory, lots of homes are built with ductwork installed, but with heating and cooling units to be installed later; and in view of the increased cost of equipment today, you may find ready cooperation among architects and builders to that end; but these jobs are being sold now to those already using gas for house-heating, and more can be sold to such customers in every area where summer air conditioning will add to the comfort of living.

★ NUMBER NINE ★

Keeping the White Collar White

OFFICE BUILDINGS represent one of the largest immediately available markets (in dollar volume) for dealers in air conditioning equipment. New construction of office buildings will be a "must" before too long. But the largest present demand for air conditioning units in this category stems from the proprietors of existing buildings.

At the present time, not more than one in 90 of America's offices are air conditioned. And that's a shame, because nowhere is it needed more. White-collar men of all grades are the backbone of our nation—and they have been neglected.

Air conditioning in professional buildings leased by physicians, lawyers, and dentists, and air conditioning in executive offices inhabited by managers of large and small corporations, some day will become standard equipment.

Both the initial cost of these installations, and subsequent operating charges, will be repaid again and again through the greater efficiency and productivity of the white-collar men whose minds are allowed to function at top capacity because they can work and think in comfort.

Air conditioning also makes available for renting and working space many buildings which are located on undesirable sites, in noisy localities, or in hot or poorly-ventilated spaces. If a white-collar man can fulfill his assignments the way he wants to—thanks to air conditioning—he'll be happy to drive far away from the high-rent district when he reports for work.

Single, smaller offices occupied by lone professional men may be ripe for the window-type room air conditioner, or even for larger water-cooled systems of 2, 3, or 5 horsepower. (Any large air conditioner can be designed to take care of two or more small offices, or even an entire office floor occupied by ambitious but impecunious white-collar entrepreneurs.)

And in the Southern and Southwestern states, where the summer season is comparatively long in duration, air conditioned offices eventually will become indispensable.

The replacement demand for new air conditioning units in offices is already heavy. Much prewar equipment is obsolete, because repairs made during the war were not calculated to maintain that equipment in the best of working order. But this "replacement" market is but a tiny drop in a huge bucket.

Modern air conditioners will soon take the place of older installations in "white collar" emporiums when enough specialty salesmen are recruited to demonstrate the merits of these new models.

And as for the untapped "white-collar" market—the 90% still unsold—all we can say is: "WOW!"

Mr. Specialty Dealer: This is another Opportunity for *YOU.*

This is one of a series of 26 advertisements dedicated to the progress of the entire air conditioning industry by

NEVINGER MFG. CO., INC.

GREENVILLE, ILLINOIS

ACME PRODUCTS
Freon Condensers
Dry-Ex Water Chillers
Evaporative Condensers
Forced Convection Units
Oil Separators
Liquid Receivers
Heat Exchangers
Pipe Coils
Hi-Peak Water Coolers
Flooded Water Coolers
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Write for Catalog on any item
Continuously serving the refrigeration industry SINCE 1919
ACME INDUSTRIES, INC.
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REPRESENTATIVES IN PRINCIPAL CITIES—SEE YOUR TELEPHONE BOOK

It Won't Be Long Now
The New KRAMER
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Write for Your Copy Now...
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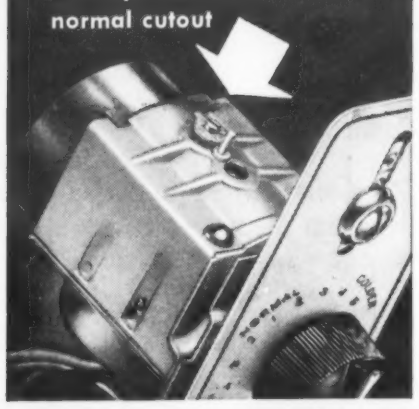
Refrigeration - Air Conditioning - Heating - Parts and Supplies
Same Day Service—From Our Complete Stocks
A Copy of Our Latest Catalog Furnished on Request

26,000 sq. ft. of Store and Warehouse Space
THE SUPPLY HOUSE THAT SERVICE BUILT
SERVICE PARTS CO. 2511 LAKE STREET MELROSE PARK, ILLINOIS

FILLING ALL NEEDS
The Cutler-Hammer Line of REFRIGERATION REPLACEMENT CONTROL
This One Universal unit alone covers 60% of all needs.

4 degree external differential adjustment either side of normal cutout

Bul. 9521N9
Adjustable Mounting Brackets
Maximum Mounting Centers..... 4-3/16
Minimum Mounting Centers..... 2-3/16
Adjustable Cutout Feature—Differential can be increased 4 degrees by turning indicator in "Hi" direction and decreased 4 degrees by turning in "Lo" direction.
Adjustable Range—Turning screw clockwise lowers settings and counter-clockwise raises settings.
Operating knob can be adjusted to meet various evaporator scale settings. New knob is ideal for varying shield thicknesses. Makes this control adaptable to wider range of single dial replacement jobs where overload is not required in unit.
The Cutler-Hammer line of Refrigeration Replacement Control will meet all the refrigeration serviceman's requirements. One Cutler-Hammer Control Unit alone . . . the *Universal* Replacement unit . . . will handle 60% of his needs. And where exact replacement control is needed, that item also will be found in the C-H Exact Replacement Control line . . . individually packed, clearly labelled, complete with dial plate, mounting screws, trim washers and full instructions for mounting and adjustment.
Behind this line are 50 years of control specialization and thorough knowledge of merchandising requirements. Thus, the line is recommended by outstanding refrigeration wholesalers from coast to coast and alert service organizations everywhere use it to reduce investment in stock, to insure regular and rapid turnover, faster completion of the job, and greater all-round satisfaction. CUTLER-HAMMER, Inc., 1362 St. Paul Ave., Milwaukee 1, Wisconsin.
CUTLER-HAMMER MOTOR CONTROL C-H
DOMESTIC, SEMI-COMMERCIAL AND COMMERCIAL CONTROL

Refrigeration Problems

And Their Solution

By P. B. Reed

For Service and Installation Engineers

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

The Oil Cycle (7)

THE OIL CHECK VALVE

Obviously, if we want oil to pass one way, but we do not want it or vapor to pass the other way, it is a job for a check valve.

So we put a check-valve in this channel or passage from the suction line to the crankcase. It will allow the oil to go through the channel *to* the crankcase, but prevent the vapor (or oil) from passing the other way, from the crankcase to the suction line.

But if the crankcase pressure stays up at 26 p.s.i.g., and the suction pressure goes down to 16 p.s.i.g., how is the oil going to go from the low pressure in the suction line to the higher pressure in the crankcase?

The whole point is: that we only want to *temporarily* hold up the pressure in the crankcase. We want to prevent that rapid pressure drop of 10 p.s.i. If the pressure in the crankcase is *gradually* reduced, the methyl in the oil is *gradually* vaporzed out of the oil without causing the violent turbulence that results in oil-slugging. It is the *rapid* drop that hurts.

BLEEDING CRANKCASE PRESSURE GRADUALLY

So we provide a very small "bleeder" passage from the crankcase to the suction line that by-passes the oil check valve. In the size compressor we are using in our example, i.e. the ⅓ h.p. used on the display case and that has about one quart of oil in the crankcase, we would have the bleeder as small as 1/16 or even 1/32 of an inch in diameter.

It would be large enough to slowly bleed the crankcase pressure down to 16 p.s.i.g. but it might take a couple of minutes or so, whereas the suction pressure would drop to 16 p.s.i.g. in a matter of a few seconds.

The oil channel with the check valve must be large enough to carry the oil back to the crankcase, so we have to keep it and in addition, provide the small bleeder hole that is small enough that it only allows the crankcase pressure to drop so slowly that no violent turbulence of the oil results.

On the other hand, during this two minutes or so that the crankcase pressure is gradually bleeding down to 16 p.s.i.g. but is still above suction pressure, the oil being returned in the suction line cannot get into the crankcase against the higher pressure.

If no provision were made for it, the oil would have to go into the cylinder and again start its round through the condenser receiver, liquid line, etc.

RETURN OIL RESERVOIR

So we provide a reservoir at the inlet side of the compressor to hold the oil returning through the suction line, during the time the crankcase pressure is being held up above suction pressure. The oil gathers in this reservoir and waits until the crankcase pressure gets down to 16 p.s.i.g. the same as suction pressure, so that the oil has a chance to get into the crankcase.

Actually, it has to wait a little longer than this, for during the time the crankcase pressure is getting down to 16 p.s.i.g. the suction pressure has gone a bit lower, possibly to 14 p.s.i.g.

At any rate, the oil gathers in the oil reservoir until the pressure in the crankcase gets down to suction pressure.

It is often supposed that as soon as the pressures in the crankcase and suction line equalize, the weight of the oil on the check valve opens the check valve and allows the oil to pour, by gravity, into the crankcase.

A check valve has a spring that holds it closed when the pressures are equalized. It is not a strong spring but it does exert a few ounces pressure, more pressure than would ordinarily be overcome by the weight of an inch or so of oil above it. Something more than the weight of the oil is required.

Fig. 10—Crankcase Pressure Variations

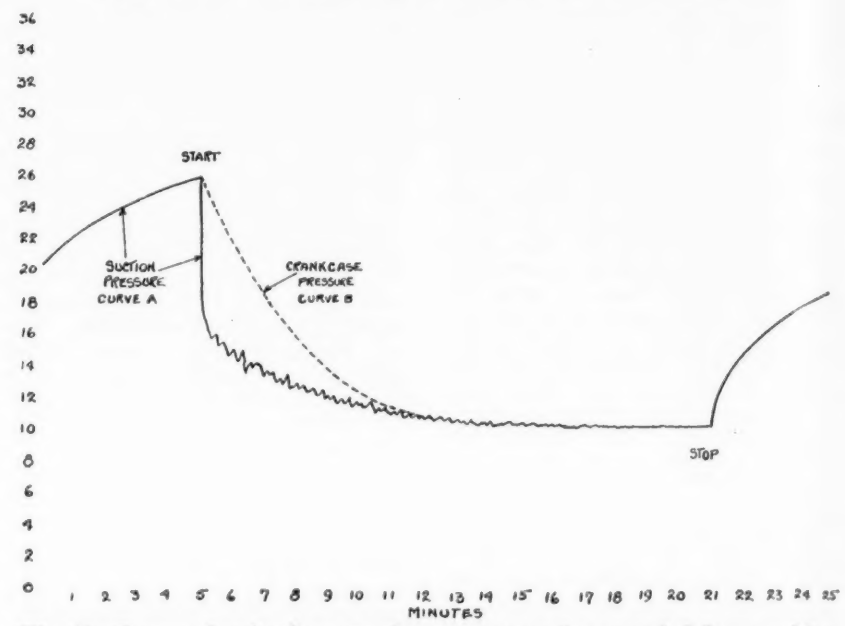


Fig. 10—Curves showing how crankcase pressure is prevented from making the abrupt drop, with suction pressure at start of a typical running cycle.

The expansion valve, float valve, or other liquid refrigerant metering device, requires a little change of pressure, temperature, or liquid level to open it. It tends to feed a little "jerkily." It opens a little wide and then closes just a bit, enough that the pressures in the evaporator and suction line fluctuate a little as are shown in curve "A" of Fig. 10.

When the expansion valve opens wider, the suction pressure rises slightly; when the valve pinches off a bit, the suction pressure drops to some extent. These slight rises in suction pressure *push* the oil from the reservoir into the crankcase, for at that time the suction pressure is a few ounces greater than the pressure in the crankcase; just enough greater to overcome the spring of the oil check valve.

OIL IS PUSHED INTO CRANKCASE

The oil returning in the suction line is temporarily deposited in the oil reservoir until a slight rise in suction pressure pushes it through the check valve into the crankcase. The check valve then closes as the suction pressure drops slightly, and oil again gathers in the reservoir until the next rise in suction pressure.

The reservoir must be large enough to hold the oil that is returned by the suction gas, during the initial period at the beginning of the run, while the crankcase pressure is being held higher than suction pressure; that couple of minutes or so at the beginning of the run till the crankcase and suction pressures equalize.

If it has capacity enough to do this it usually has more than enough capacity to take care of other times when crankcase pressure is temporarily above suction pressure; during those slight fluctuations resulting from variations in the feeding of liquid into the evaporator.

As mentioned above, all compressors pump some oil. During normal operation this is due to the pistons wiping off the oil from the cylinder walls that was splashed up on them by the rods and shaft throws or eccentrics. This slight amount of oil does no harm; in fact some oil is necessary in order to assure lubrication and tight sealing of the discharge and suction valves, and later in the cycle, of solenoids and other line valves.

(To Be Continued)

New England Supply Wholesalers Meet

BOSTON—At a recent meeting of the New England Refrigeration Wholesalers held at the Kenmore hotel here Frank Morley was elected chairman and Carle Payson, secretary-treasurer of the organization for the coming year. Plans were made for another meeting on Dec. 12.

ROTARY SEAL
REPLACEMENT UNITS POINT THE WAY TO "SEALING WITH CERTAINTY"

UNIT No. 14222
For refrigeration compressors as used in commercial, semi-commercial, air conditioning and household installations.
ROTARY SEALS are available for over 848 models. See our stock list.
SEE YOUR JOBBER!
THE mechanical seals for ROTARY SEAL COMPANY rotating shafts
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CANADIAN AGENT: 2025 ADDINGTON AVENUE • MONTREAL, QUEBEC, CANADA

Merchandise Comes to Life In Texas Store So Customers See How It'll Look In Home

AUSTIN, Tex.—Calcasieu Lumber Co., dealer in refrigerators, refrigeration, and air conditioning equipment, which recently moved into a new three-story building covering a large part of a city block here, has arranged its displays of just about everything for the home to show customers—by demonstration—what their dwellings will look like when they build or remodel.

For example, two complete kitchens have been built to show the latest appliances in place. The displays are complete to wall finish, and even to plants of potted ivy growing on white what-not shelves.

"A central Texas housewife walks into the display and sees the way her kitchen ought to look," the company says.

Again, a model air conditioning installation is encased in glass for easy display. The new building itself is air conditioned throughout.

Within the store is a 180-seat auditorium which serves as the firm's demonstration of how a modern heating and cooling system works. The auditorium is utilized by civic and social groups under Calcasieu's public service policy.

In addition to the actually-installed displays of refrigerators and air conditioning unit, Calcasieu customers examine a complete selection of leading-make refrigerators and air conditioners in various capacities.

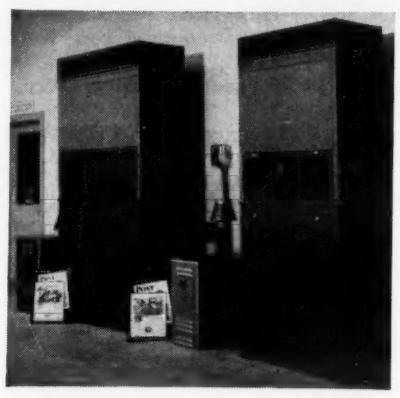
This "see-it-for-yourself" idea was incorporated in minute detail in construction of the building.

Each office and sales room is paneled in a different type of wood or is decorated with a different wall finish or wallpaper. If the customer's taste runs to walnut or mahogany plywood, for instance, there is a room that will let him see the wood as it actually looks on the wall.

Outside building materials are demonstrated in the same way. An entire upstairs wall graduates inside from wood to brick and then to cut-stone. Windows and doors to offices demonstrate different types of home construction.

* * *

'See It-for Yourself'



Calcasieu Lumber Co.'s customers don't have to visualize what an air conditioner looks like. Here are two on display in the new store. A complete floor display of conditioners and heating units supplements the firm's actually-installed demonstration of a modern temperature-control system at work.

William S. Drake, Jr., president of Calcasieu, describes the building as an attempt to "roll a hundred homes into one big, three-story display."

The whole idea grew because, as Mr. Drake puts it, "we thought that people investing in a home ought to be able to see what they're buying, instead of having to visualize it from a drawing or a picture. We decided to let them see the real thing—life-sized—in operation."

Now Calcasieu salesmen have about half their jobs done before they begin talking to a customer, according to Mr. Drake.

A "home consultation service" makes the program complete. When a patron walks in the store with no more than a basic idea for his home, service personnel suggest arrangements, fixtures, heating and cooling equipment, and decorations.

This modern, streamlined concept of merchandising works hand-in-glove with an old idea on customer relations. That idea is to reflect the friendly, easy-going atmosphere of the Texas country store.

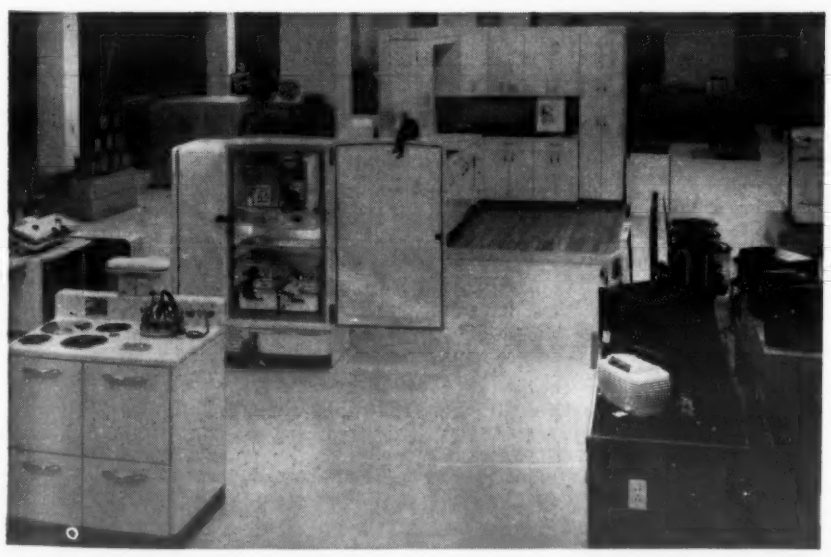
Calcasieu, a central Texas business leader since 1883, is said to be one of the oldest largest business firms in the area and one of the Southwest's biggest merchandisers of refrigeration and air conditioning units and lumber.

It is estimated that the concern has built better than half the homes standing in Austin today. The firm introduced central Texas to the instalment plan in home construction in the twenties and thereby brought about one of the city's greatest home-building booms, it is claimed.

Many believe Calcasieu's continued success through the years has been due entirely to the personal interest taken in each customer by the management. As one customer remarked, "the president of Calcasieu is just as likely to wait on you as anybody else."

* * *

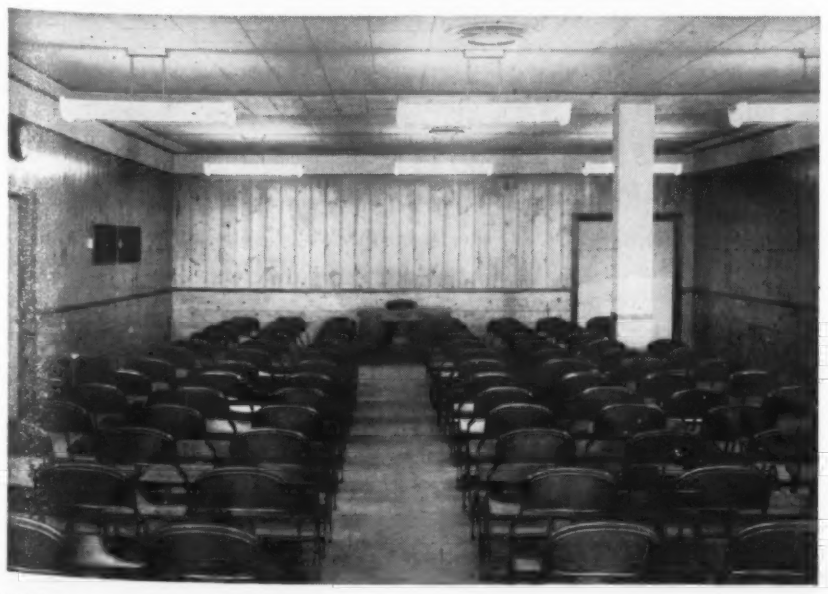
Displays Like This Do Half Salesman's Job



Refrigerators and home freezers play a major part in staging Calcasieu's "tableau" of an attractive, efficient kitchen for the modern home. A complete kitchen, with all appliances and fixtures in place, shows the central Texas housewife an ideal arrangement.

* * *

Even Auditorium Helps Sell Equipment



Within the new Calcasieu structure in Austin is this 180-seat auditorium which serves as the firm's "see-it-for-yourself" demonstration of how a modern heating and cooling system works. The auditorium is utilized by civic and social groups of central Texas under Calcasieu's public service policy.

Plan Air Conditioned Palm Beach Hotel

PALM BEACH, Fla.—A modern hotel featuring air conditioning in every room is planned for construction on Sunrise Ave. between the Paramount theater building and the ocean here by Coral, Inc., Bernard Wall, vice president of the firm, has announced. The $500,000 structure will have 70 rooms and baths.

Prompt Shipment!

Completely Equipped with Compressor

The Popular

PERLICK DIRECT DRAW DISPENSERS

with the EXCLUSIVE Air Cooled Faucet Standards*

*Perlick Dispensers and Air Cooled Faucet Standards are covered by Patents No. 225-7070 and 226-2043!

The most popular beer dispensing system is the Perlick Direct Draw Dispenser, for it delivers brewery-fresh beer from keg to glass! Now available in 2 sizes, for prompt delivery—complete with condensing units. It pays to give preference to Perlick!

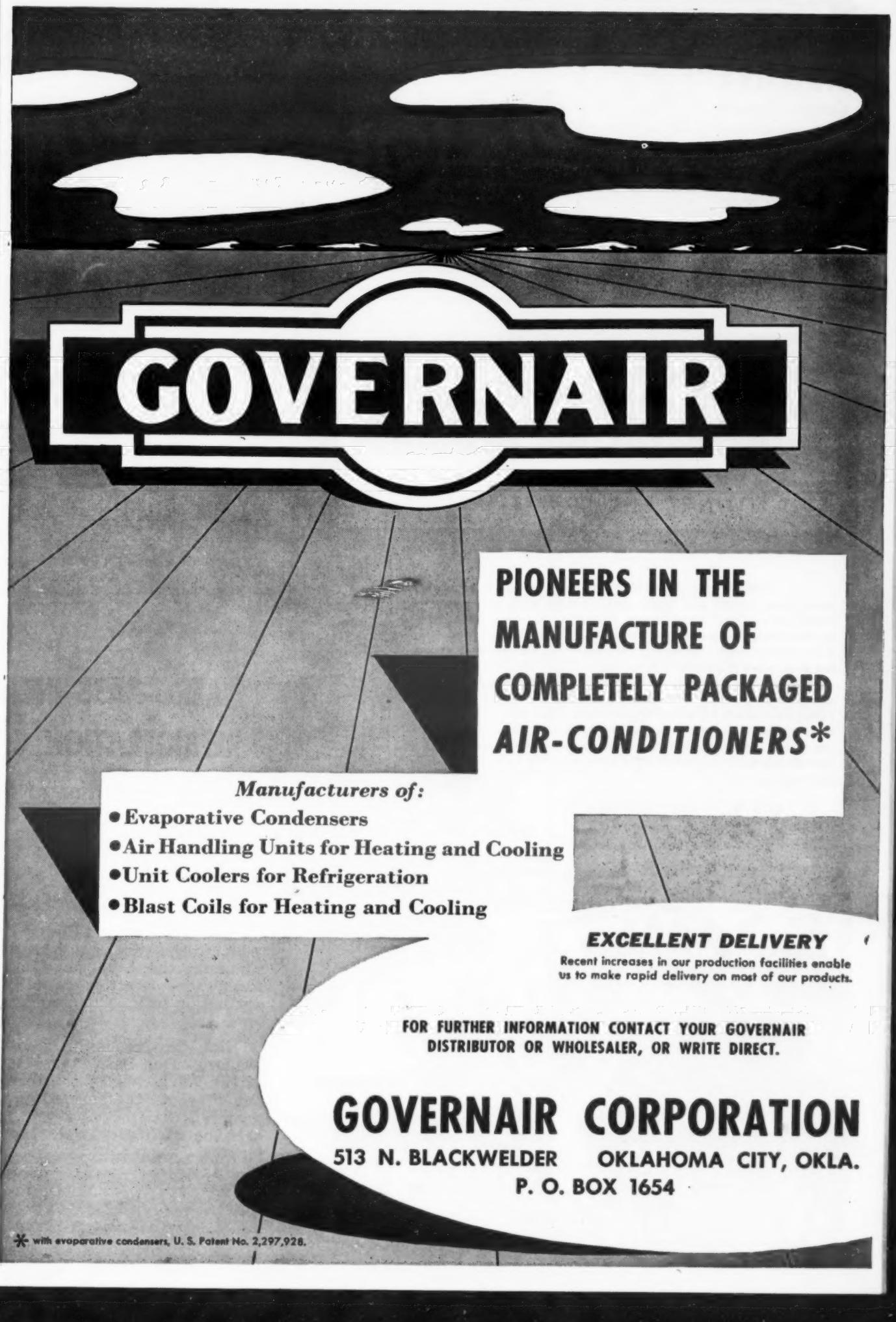
R. PERLICK BRASS CO.
3110 W. MEDUCKE AVE.
MILWAUKEE 10, WIS.

Maximum EFFICIENCY • Minimum ATTENTION

Precision manufacture gives Larkin refrigeration products life-time top performance and lasting fortitude. Made by the originators of the patented Cross Fin Coil, Larkin is the recognized leader in precision manufacture of Larkin Humi-Temp Forced Convection Units — Bare Tube and Zinc Fused Steel Plate Coils — Air Conditioning Units — Instantaneous Water Coolers — Evaporative Condensers — and all other equipment factors used in dependable commercial and industrial refrigeration.

THE WATCH DOG OF THE NATION'S FOOD SUPPLY

LARKIN COILS 519 MEMORIAL DRIVE • S•E• ATLANTA • GEORGIA


GOVERNAIR
PIONEERS IN THE MANUFACTURE OF COMPLETELY PACKAGED AIR-CONDITIONERS*
Manufacturers of:
• Evaporative Condensers
• Air Handling Units for Heating and Cooling
• Unit Coolers for Refrigeration
• Blast Coils for Heating and Cooling
EXCELLENT DELIVERY
Recent increases in our production facilities enable us to make rapid delivery on most of our products.
FOR FURTHER INFORMATION CONTACT YOUR GOVERNAIR DISTRIBUTOR OR WHOLESALER, OR WRITE DIRECT.
GOVERNAIR CORPORATION
513 N. BLACKWELDER OKLAHOMA CITY, OKLA.
P. O. BOX 1654
* with evaporative condensers, U. S. Patent No. 2,297,928.

CLARK BRIDGMAN CO.
549 W. WASHINGTON BLVD.
CHICAGO 6, ILL.
Sales and Engineering
Product Coolers, Evap. Condensers
Air Conditioning, Liquid Coolers
Water Chillers, Heat Exchangers
Liquid Receivers
A. A. Reed, 14 Poplar Park, Pleasant Ridge, Mich.
R. R. Gregory, P. O. Box 184, Easton, Ill.
R. E. Kenney, 4243 Crocker Ave., Minneapolis, Minn.

HEAT TRANSFER EQUIPMENT
MARLO COIL COMPANY
SAINT LOUIS, MISSOURI

PAR REFRIGERATION EQUIPMENT
Tops in PERFORMANCE ECONOMY and EFFICIENCY
Lynch Manufacturing Corporation
... By Comparison — You'll Buy PAR
General Offices, Toledo 1 • Factory, Defiance, Ohio, U.S.A.

GET GENUINE WAGNER Commutators
They are built as an original motor part—your assurance of an accurate all-around fit for correct operation. Liberal design provides extra strength, permits refacing several times, if necessary, with safety. Segments are accurately milled to facilitate connection of rotor leads. Get them now from your Wagner distributor. Name on request.
M47-28
Wagner Electric Corporation
ESTABLISHED 1891
6471 Plymouth Avenue, St. Louis 14, Mo., U. S. A.
ELECTRICAL AND AUTOMOTIVE PRODUCTS

The KEY to AIR CONDITIONING
One of a series from
by James J. LaSalvia

Refrigeration Cycle (Cont.)

EXAMPLE NO. 1

The heat gain capacity is 210,000 B.t.u. per hour; a cooling coil of 44° F. is required, having available 80° F. water for condensing. Water is to be wasted to the sewer. What is the size of the compressor, suction temperature, condensing pressure, amount of water per hour, and the kw. input required?

Requiring a cooling coil temperature of 44° F. means that the compressor must be selected at 3° lower or at 41° F. suction temperature. (This 3° is for losses in the suction line.)

Referring to Chart 2 we find that for 210,000 B.t.u. with 80° F. condensing water the compressor must operate at 41° suction temperature or 38 lbs. suction pressure and 132.5 lbs. condensing pressure. It will require 1,680 g.p.h. and 14.3 kw.

Therefore, in this case the following will be used:

1. One 15-hp. compressor.
2. Suction temperature of 41° F., or suction pressure of 38 lbs.
3. Condensing pressure of 132.5 lbs.
4. 1,680 g.p.h. of 80° F. condensing water.
5. 14.3 kw. input per hour.

EXAMPLE NO. 2

Having the same problem as in Example No. 1, use 100° F. water for condensing instead of 80° F.

Referring to Chart 2 we find that with 210,000 B.t.u. and 100° F. condensing water, the suction temperature is 44° F.

As we require a 44° F. cooling coil temperature, a 44° F. suction temperature is too high, since there is no allowance for loss in the suction line. Therefore, use the next size compressor.

Referring to Chart 3 we find for 210,000 B.t.u. and 100° F. condensing water, that the compressor will operate at 33° F. suction temperature and 167 lbs. condensing pressure. It will require 2,280 g.p.h. and 19.6 kw. input per hour.

Therefore, in this case the following will be used:

1. One 20-hp. compressor.
2. Suction temperature of 33° F., or suction pressure of 29.8 lbs.
3. Condensing pressure of 167 lbs.
4. 2,280 g.p.h. of 100° F. condensing water.
5. 19.6 kw. input per hour.

a. For safer operation it would be better to use a 25-hp. motor instead of a 20 hp. on the same compressor as selected. A 20-hp. motor maximum input is 20 kw., and we have an input of 19.6 kw. The 20-hp. motor will run too greatly loaded.

b. The compressor working at 33° F. suction temperature is 11° lower than the cooling coil temperature of 44° F., which will cause the cooling coil to operate at about 36° F. thereby cooling the air to a lower temperature than required.

The difference is too great, and for good practice a suction pressure control valve should be installed in the suction line to maintain a constant suction temperature out of the cooling coil. This valve would be set at 41° F. The cooling coil would operate at 44° F., and the compressor at 33° F. suction temperature.

COOLING TOWER APPLICATION

When a water saving device such as a cooling tower is used, the compressor capacity ratings will increase over what is shown on Charts 1, 2, 3, 4, and 5.

The charts are based on a 20° rise in temperature of the condensing water when city water is used for condensing and then is thrown away to the sewer. In such cases, if the water enters the condenser at 70° it will leave the condenser at 90°. If entering at 80° it will leave at 100°, etc.

With cooling towers, the temperature rise is usually based on a 10° or 5° rise. This of course means that more water will be used per ton of refrigeration than what is shown on the charts, but such water will be used over and over again.

It is obvious when more water is used, the B.t.u. capacity of a compressor rises, operating at a constant suction temperature. The condensing pressure and kw. input will be lowered.

Water used for condensing purposes from a cooling tower is usually based from 80° to 87° F. The basic point is taken to be from 5° to 7° above the wet bulb temperature of the surrounding air of the cooling tower.

Use the following factors in conjunction with the charts, to arrive at data on compressors operating with cooling towers:

For 10° F. temperature rise of condensing water (keeping constant suction temperature):

1. Capacity in B.t.u. will increase 10%.
2. Condensing water will be 2½ times as much.
3. Condensing pressure will be lowered 15%.
4. Kw. input will be lowered 10%.

For 5° F. temperature rise of condensing water (keeping constant suction temperature):

1. Capacity in B.t.u. will increase 15%.
2. Condensing water will be five times as much.
3. Condensing pressure will be lowered 20%.
4. Kw. input will be lowered 13%.

From the above, it can be seen that the 10° rise in condensing water would be the best balance to use with the cooling tower. The 5° rise should be used only when it is required to get the most out of the compressor.

(To Be Continued)

Selection of Proper Size Compressor for Air Conditioning Aided by Chart

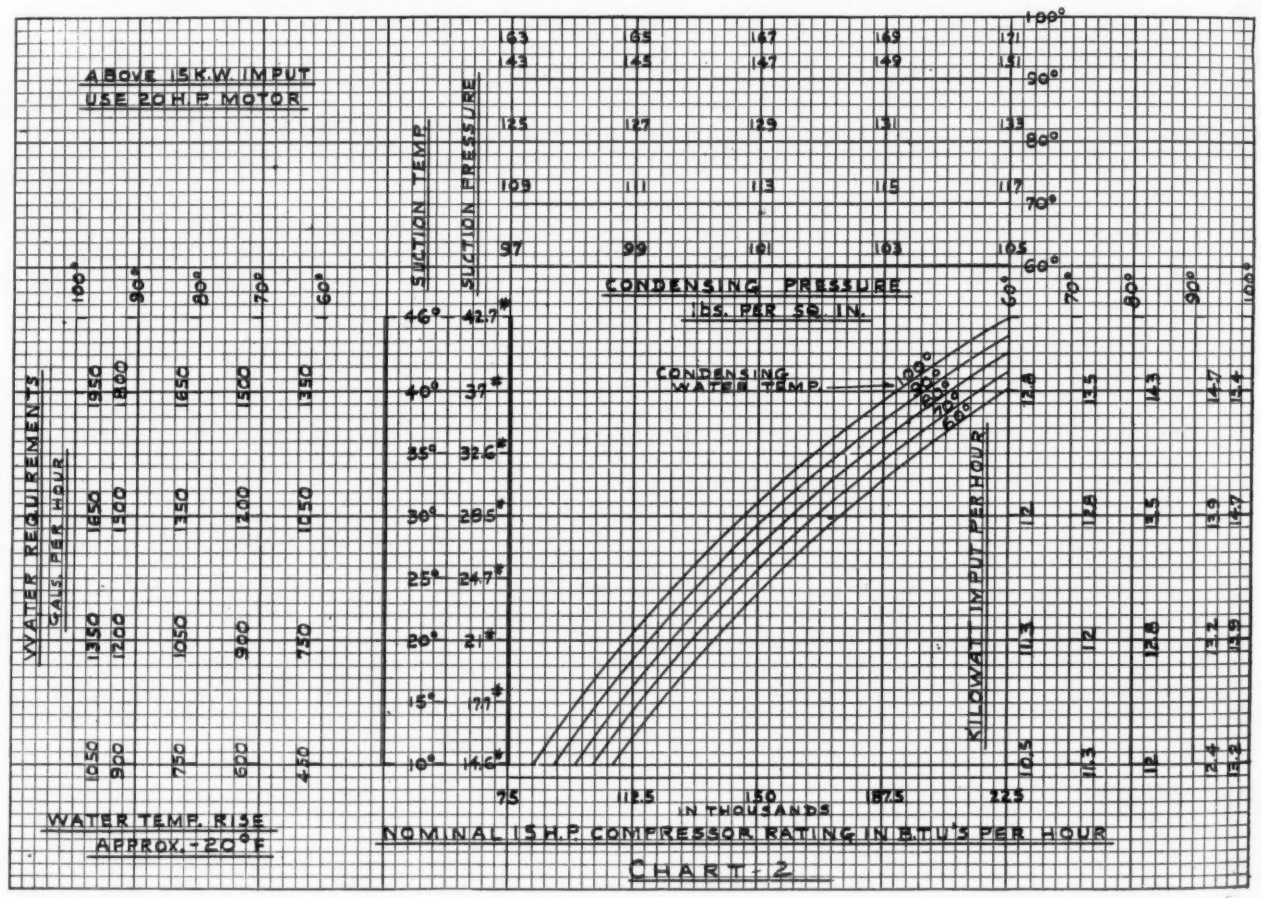

ABOVE 15 K.W. IMPUT USE 20 H.P. MOTOR
SUCTION TEMP.
SUCTION PRESSURE
CONDENSING PRESSURE LBS. PER SQ. IN.
CONDENSING WATER TEMP.
WATER REQUIREMENTS GALS. PER HOUR
KILOWATT IMPUT PER HOUR
WATER TEMP. RISE APPROX. - 20° F
IN THOUSANDS
NOMINAL 15 H.P. COMPRESSOR RATING IN B.T.U.'S PER HOUR
CHART - 2

Chart 2—Capacity of a 15-hp. compressor can be determined for various condensing water temperatures from this chart, which also shows the suction temperature and pressure, water requirements, and kw. input required.

"We beat the rust and corrosion problem
WITH NIBCO VALVES, WROT COPPER FITTINGS AND COPPER TUBES."

THAT'S what your industrial customers will tell you. You'll make more money and better please customers if you recommend NIBCO Valves and Wrot Copper Fittings with copper tubes for industrial piping on water, air, steam and other process lines. Copper is permanent, free from rust. It ends leaks and maintenance expense. But even more important is the complete freedom from breakdowns, work stoppages and delays. Surprisingly, the installation cost compares very favorably with that of ordinary iron pipe. NIBCO Wrot fittings are made by patented processes which assure absolute uniformity with close tolerances accurately maintained. Accurate forming means easier alignment, simpler installation and stronger joints. Get all the facts on NIBCO Wrot Fittings. Write today for complete Catalog 614

NORTHERN INDIANA BRASS CO.
ELKART • INDIANA

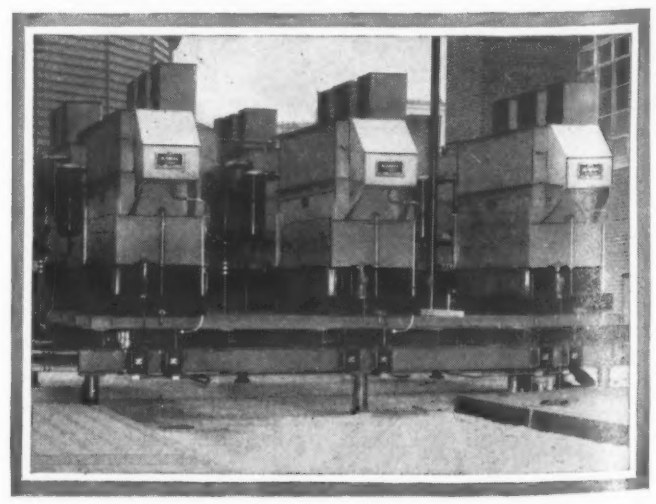
WROT Copper Fittings

AERO-PASS INCREASES REFRIGERATION CAPACITY
Higher Production at Lower Cost

• Increase your production of refrigerated products or get faster chilling when putting products into refrigerated storage . . . without additional compressors . . . by using a Niagara Aero-pass Condenser.

By condensing at lower temperature and reducing the compressor head pressure to the minimum, the Aero-pass Condenser either increases the effective capacity of your compressor or cuts its power consumption, or in some cases, gives both advantages.

This gain is lasting because the patented Niagara "Duo Pass" takes the superheat out of the refrigerant gas before it is condensed and prevents the formation of scale on condenser tubes. Users say it takes away over half the troubles of operating a refrigeration plant.



Other patented features are the "Oilout" which keeps out oil and dirt, and the "Balanced Wet Bulb Control" which keeps head pressures down.

For a complete description write for Bulletin 103-AC.

NIAGARA BLOWER COMPANY
Over 30 Years of Service in Industrial Air Engineering
405 Lexington Ave. New York 17, N. Y.
District Engineers in Principal Cities

INDUSTRIAL COOLING HEATING • DRYING NIAGARA HUMIDIFYING • AIR ENGINEERING EQUPT.

New York, Pennsylvania California Rank 1-2-3 In Sales-by-States

States	Unit Sales
Alabama	23,212
Arizona	8,807
Arkansas	15,854
California	147,139
Colorado	18,150
Connecticut	35,185
Delaware	4,512
District of Columbia	23,152
Florida	32,769
Georgia	34,840
Idaho	7,152
Illinois	135,530
Indiana	60,436
Iowa	37,286
Kansas	18,958
Kentucky	24,190
Louisiana	23,993
Maine	10,317
Maryland	29,774
Massachusetts	62,518
Michigan	99,787
Minnesota	41,440
Mississippi	13,776
Missouri	64,236
Montana	6,917
Nebraska	20,270
Nevada	3,435
New Hampshire	7,267
New Jersey	81,710
New Mexico	4,352
New York	212,504
North Carolina	33,677
North Dakota	6,953
Ohio	134,250
Oklahoma	22,676
Oregon	26,179
Pennsylvania	157,802
Rhode Island	16,877
South Carolina	15,717
South Dakota	7,287
Tennessee	36,749
Texas	98,769
Utah	10,861
Vermont	3,961
Virginia	29,887
Washington	35,332
West Virginia	25,731
Wisconsin	45,451
Wyoming	2,737
Total United States	**2,020,364**

The unit sales figures shown on this summary of sales-by-states are not Factory Sales nor do they reflect the sales of all manufacturers—but rather Distributor and Dealer sales of the participating Nema companies only.

Nema Refrigerator Sales for September And the First Nine Months of 1947

NEMA SALES FOR SEPTEMBER AND FIRST NINE MONTHS OF 1947

COMPLETE REFRIGERATORS ONLY

(Lacquer and Porcelain Exterior Cabinets) (Advertised Sizes)

SEPTEMBER

	Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1.	Less than 4 cu. ft.	513	....	....	513
2.	4 cu. ft.	5,981	....	2,070	8,051
3.	5 cu. ft.	1	....	....	1
4.	6 cu. ft.	31,621	....	2,446	34,067
5.	7 cu. ft.	123,098	2,185	9,595	134,878
6.	8 cu. ft.	64,996	....	2,108	67,104
7.	9 and 10 cu. ft.	38,490	397	2,653	41,540
8.	11 and 12 cu. ft.	....	....	....	....
9.	13 cu. ft. and up	3,928	....	....	3,928
10.	**Total**	268,628	2,582	18,872	290,082

FIRST NINE MONTHS

	Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1.	Less than 4 cu. ft.	1,930	....	12	1,942
2.	4 cu. ft.	15,759	1	4,531	20,291
3.	5 cu. ft.	1	....	....	1
4.	6 cu. ft.	219,924	854	13,612	234,390
5.	7 cu. ft.	1,189,477	9,246	84,800	1,283,523
6.	8 cu. ft.	300,899	890	12,184	313,973
7.	9 and 10 cu. ft.	379,698	1,399	19,725	400,822
8.	11 and 12 cu. ft.	....	....	....	....
9.	13 cu. ft. and up	3,932	....	....	3,932
10.	**Total**	2,111,620	12,390	134,864	2,258,874

Participating companies: Admiral Corp.; Crosley Div., AVCO Mfg. Corp.; The Coolerator Co.; Hotpoint, Inc.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Nash-Kelvinator Corp.; Norge Div., Borg-Warner Corp.; Seeger Refrigerator Co.; Westinghouse Electric Corp.

Dept. Store Sales Up 11% Week of Nov. 15

WASHINGTON, D. C.—A gain of 11% in department store sales for the week ended Nov. 15 over a similar week last year has recently been reported by the Federal Reserve Board.

In recording this gain, the Board noted that every Federal Reserve district increased its sales over last year at this time. Sales for the four week period ending Nov. 15 were up 10%, and for the year ending on the same date they were up 8%, the Board said.

THE PICTURE OF QUALITY

DISPLAY CASE
NEW — IMPROVED

This PERFECTED DISPLAY CASE has expansion valve installed, coils hooked up, with drain included.

We Also Manufacture a Complete Line of Commercial Refrigeration Equipment

IMMEDIATE DELIVERY
ALL EQUIPMENT GUARANTEED

GENERAL REFRIGERATORS CORP.
MANUFACTURERS SINCE 1928
678 BROADWAY NEW YORK 12, N. Y.
GRC

This Cabinet Doesn't Gather DUST!! It Gathers DOLLARS!!

$ $ $ $ $ $

SPECIFICATIONS
Model #4714 C. 13.5 Cu. ft. capacity. Length 65"; Width 30"; Height over superstructure 54"; Height over cabinet 34". ⅓ H.P. Jack & Heintz Compressor.

YES . . . The New Haldorf 4714C will gather PROFIT for YOU, instead of dust, because it has all the essential features a merchant looks for in a frozen food or ice cream merchandising cabinet!

★ IT REQUIRES LESS FLOOR SPACE.
★ IT HOLDS MORE MERCHANDISE.
★ IT IS DESIGNED FOR CUSTOMER ATTRACTION.
★ IT IS ENGINEERED FOR YEARS OF RUGGED DUTY.
★ IT COSTS LESS TO MAINTAIN AND OPERATE.
★ IT HAS GREATER MOBILITY.

Requires less space—Less than 5½ feet long; at least eight inches shorter than other cabinets having the same capacity.

Stores more merchandise — 13.5 cu. ft. of storage space. Holds up to 550 packages WITHOUT STACKING A SINGLE CARTON ABOVE THE FREEZE LINE.

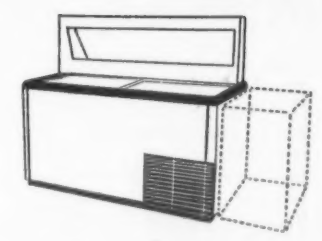
Customer sales appeal—Beautifully streamlined! Every inch smooth and free of metal snags and jutting screws. Customers can't tear clothing. Full view one piece stainless steel top and track. Sliding Frost-free INSULATED glass lids that are quickly and easily removed to facilitate self service.

Years of rugged service — Made from high grade auto-body steel. INSULATED with high density Fiberglass and cork, vapor sealed. FINISHED with two coats of double baked, high gloss enamel to give long-life protection against rust. Freon No. 12. A ⅓ H.P. Jack & Heintz compressor MOUNTED IN CABINET. Every joint and seam sealed tight against temperature loss and moisture infiltration.

Greater mobility—A complete, compact unit, ready to move anywhere, any time. Plugs into any 110V. AC outlet. IT'S IDEAL FOR THE LARGE AND SMALL MERCHANT ALIKE; WHERE FLOOR SPACE IS A VITAL FACTOR.

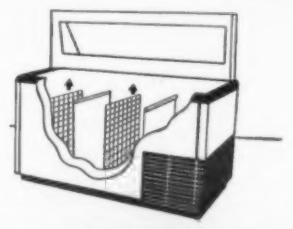
Low in cost — Only $675.00 complete with FLUORESCENT LIGHTED SUPER-STRUCTURE; 36 ITEM STRIPS; 150 PRICE NUMERALS, and ATTRACTIVE ETCHED GLASS SIGN. Your own trade mark, brand name or personal message ETCHED on sign free of charge. Entire cabinet is engineered to exacting specifications to give MAXIMUM PERFORMANCE AT LOWEST COST.

But that's not all — YOU CAN ACTUALLY ADJUST THE SIZE OF STORAGE COMPARTMENTS TO FIT ODD SIZED CARTONS. Just slide adjustable, removable wire partitions right or left; or remove entirely. This feature will enable you to stock a *greater number of every type carton* WITHOUT LOSS OF VALUABLE STORAGE SPACE.



MORE SPACE MEANS PROFIT

HALDORF KNOWS SPACE IS MONEY; therefore Model #4714C has an additional shallow compartment directly over the compressor. Special insulation keeps heat out. THERE'S NO WASTED SPACE IN A HALDORF! Foot for foot; dollar for dollar . . . the new HALDORF Model #4714 C means MORE profit to everyone, EVERYWHERE!

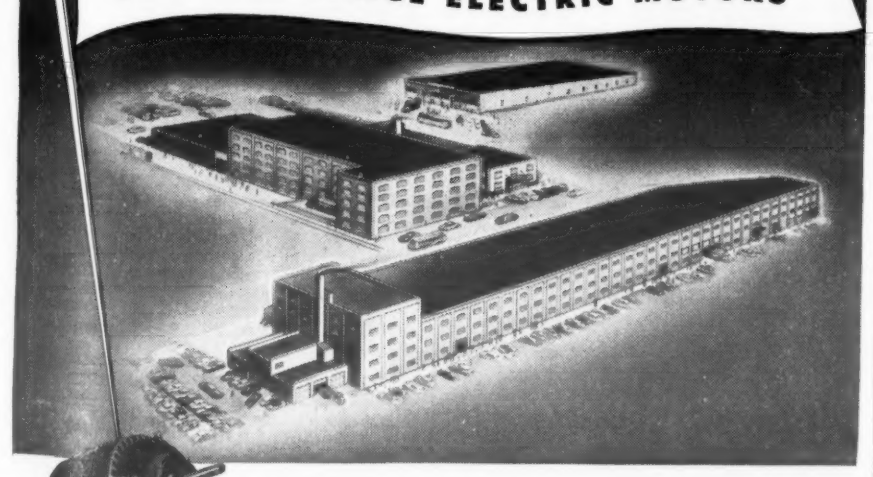


HERE'S ANOTHER STORY FOR YOUR CUSTOMERS—This same model also available in the remote compressor type. The same size cabinet without compressor mounted in—cabinet has a capacity of 18 cubic feet! CALL . . . WRITE . . . WIRE US TODAY. COMPLETE INFORMATION ON ALL OUR MODELS WILL BE SUPPLIED.

$675.00
F.O.B. PHILADELPHIA
COMPLETE
WITH SUPERSTRUCTURE

The HALDORF MFG. COMPANY
1435-37 NORTH THIRTY-FIRST STREET
PHILADELPHIA 21, PENNSYLVANIA

HEADQUARTERS
FOR LOW-RANGE ELECTRIC MOTORS



Redmond
. . . Builder of more than 20,000,000 MicroMotors

HERE is an organization of specialists who concentrate every effort on small electric motors and their application. Here the customer can discuss engineering details confidentially, knowing he is dealing with a motor manufacturer that does not build consumer products in competition with his own. When you need advice, contact Redmond. When you need dependable low-range fractional motors, check on the famous Redmond Micromotors.

A.C. MICROMOTORS
4-pole shaded pole up to 1/15th hp.
SPEED CONTROLLERS • SMALL BLOWERS

D.C. MICROMOTORS
Continuous duty up to 1/20th hp.
Intermittent duty up to 1/10th hp.

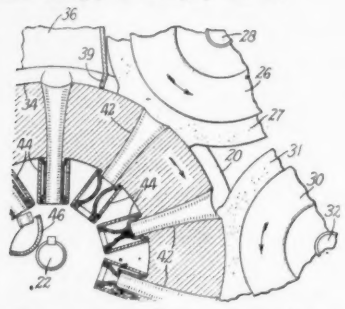
REDMOND Redmond COMPANY, INC., MAIN OFFICES: OWOSSO, MICH.
EASTERN AREA SALES: 420 Lexington Ave., New York 17, N. Y.
PACIFIC COAST SALES: Redmond Company of Calif., Inc., 117 W. 9th St., Los Angeles 15, Calif.

PATENTS

Week of September 16

(Continued)

2,427,644. METHOD OF AND APPARATUS FOR ROTARY EXTRUDER. Crosby Field, Brooklyn, N. Y., assignor to Flakice Corp., Brooklyn, N. Y.

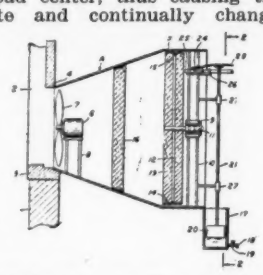


7. In apparatus for compacting ice fragments or the like by forcing said fragments through a converging, nozzle-like chamber, in combination, a source of ice fragments supply, a converging, nozzle-like chamber having a receiving opening for receiving ice fragments and a relatively smaller delivery opening through which the compacted ice mass is extruded, means for successively delivering ice fragments from said supply to said receiving opening to fill said chamber to the brim, and a compression roll having a resilient rolling surface adapted to roll successively across said receiving opening, whereupon the portion of said resilient surface of said roll which is unsupported by the brim of said chamber expands through said opening and into said chamber and thereby compresses fragments therein toward said opening.

Week of September 23

2,427,714. AIR CONDITIONER. Charles G. Cooper, Yuma, Ariz.

1. An air conditioner comprising a casing open at both ends, means for forcing air through the casing, a rotatable water-absorbing disc pad having its face substantially closing the inlet end of the casing so that the air will be forced through the pad from one face to the other, and means for delivering a stream of water against the pad off-center so that the greater weight of the water absorbed by the pad will be to one side of the pad center, thus causing the pad to rotate and continually change the



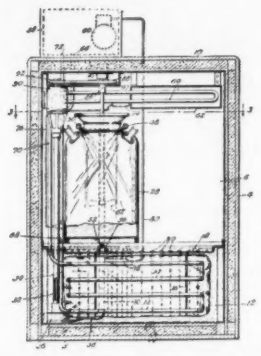
gravitational pull on the water in the pad so that the water will percolate in all directions and be absorbed by the entire pad, the air flowing through the casing to the outlet, and passing through the moistened pad and being cooled thereby, an auxiliary pad placed between the rotatable pad and the outlet end for absorbing any excess water vapor.

2,427,869. DEVICE FOR COOLING BY IMMERSION IN A CHILLED LIQUID. Floyd J. McMichael, Orlando, Fla.

1. A produce display unit including a casing, a tray arranged within the casing and adapted to receive produce for display, a refrigerating pan adapted to contain a refrigerant and formed to receive said tray therein immersing the produce in said refrigerant, means for maintaining said refrigerant chilled, the tray and pan providing complemental members one movable relative to the other within the casing for immersing said produce, means shiftably mounting said movable member, and means for shifting said movable member periodically.

REISSUE

22,917. MEANS FOR AND METHOD OF COOLING BY SPRAYING A COOLED LIQUID. Joseph W. Chamberlain, Holland, Mich.



1. An apparatus of the class described comprising a compartment adapted to store a cooling fluid therein and having means to freeze a block of ice, means for conveying said cooling fluid from said compartment after it has been cooled and passing it in heat exchange relation with a substance to be cooled, and means to distribute said cooling fluid substantially uniformly over said ice in such a way as to melt a plurality of holes in the ice.

FOR LICENSING OR SALE

The following thirty-two patents relating principally to various phases of absorption refrigeration have been made available for sale by the Perfection Stove Co., 7609 Platt Ave., Cleveland, Ohio.

1,763,673. REFRIGERATOR.
1,789,066. REFRIGERATOR.
1,789,067. REFRIGERATOR APPAR.
1,816,955. REFRIGERATOR CONSTRUCTION.
1,816,956. CONDENSER.
1,844,932. COMBUSTION REFRIGERATION APPARATUS.
1,858,280. SAFETY BLOW-OFF DEVICE.
1,871,879. REFRIGERATION APPAR.
1,899,852. TEMPERATURE CONTROL MEANS FOR REFRIGERATION COMPARTMENTS.
1,914,687. LIQUID RETURN FOR INTERMITTENT ABSORPTION REFRIGERATORS.
1,917,751. GAS BURNING APPLIANCE FOR ABSORPTION REFRIGERATORS.
1,929,282. AUTOMATIC CONTROL FOR ABSORPTION REFRIGERATORS.
1,940,621. MILK COOLER.
1,946,029. REFRIGERATION APPAR.
1,948,447. FUEL SUPPLY INDICATOR.
1,961,815. CONDENSER.
1,985,816. COOLING UNIT.
1,985,950. ENAMELED CONDENSER.
1,991,271. AUTOMATIC CONTROL FOR INTERMITTENT ABSORPTION REFRIGERATION APPARATUS.
2,014,465. COMBUSTION OUTFIT.
2,027,631. REFRIGERATION APPARATUS.
2,032,853. FLOW CONTROL.
2,045,043. REFRIGERATING SYSTEM.
2,045,053. REFRIGERATING SYSTEM AND METHOD.
2,045,054. INTERMITTENT ABSORPTION REFRIGERATING SYSTEM.
2,062,921. REFRIGERATION APPAR.
2,086,118. ADJUSTABLE SHELF FOR REFRIGERATORS OR THE LIKE.
2,092,205. LIQUID FUEL BURNER.
2,102,056. REFRIGERATION CONTROL.
2,162,244. REFRIGERATOR TRAY LOOSENING MEANS.
2,212,364. LIQUID FUEL FIRED ABSORPTION REFRIGERATOR.
2,341,188. ABSORPTION APPARATUS.

Every One in the Industry Should READ . . .

GEORGE F. TAUBENECK'S

ONE FOOT in THE DOOR

The LAUGH - LEARN - PROFIT BOOK

. . . Because Every Laugh Drives Home a SOUND SALES PRINCIPLE!

"This is a funny book," declares George Taubeneck, editor of *Air Conditioning & Refrigeration News*, in his heading for Chapter 1. That's true. You'll laugh! You'll *learn*, too.

"One Foot in the Door" is the laugh-and-fact-packed story of Specialty Selling. It takes you back through chuckling pages to the birth of the specialty merchandising art under John H. Patterson of N.C.R. fame, and it takes you forward—again with smiles and guffaws—to the shining future.

It clearly delineates the selling principles which years of experience have set up—and makes them easy to remember by associating these principles with humorous anecdotes. It vigorously points up the job ahead for sales management—tells what, where, why, when, and how.

It pleads eloquently for—and points the way toward—the more efficient distribution system that will be one of the strongest bulwarks of private enterprise.

It does all this so agreeably and fascinatingly that, when you finally finish it, you'll call it the most enjoyable book you've read in a decade.

CHAPTER TITLES from "One Foot in the Door"

1. "This Is a Funny Book"
2. The Old Master—and How He Got That Way
3. Making Direct-Mail Advertising Respectable
4. Hair Grows on a Billiard Ball
5. Publicity Isn't Always Free
6. People See Better Than They Hear
7. How to Humanize Your Company
8. Tom Thumb Cartels
9. Finding the Rainbow's Pot-of-Gold
10. There's Always One Best Way to Tell Your Story
11. You Can't Get Off First Base Without a Sales Manual
12. "It Pays for Itself"
13. Ask the Man Who Uses One
14. Everybody Loves a Convention
15. Sales Training Schools Must Be Clever and Entertaining
16. Circuit Riding Becomes a Profession
17. Make It Clear, Make It Simple, Make It Direct
18. Just a Minute, Dear
19. Five Will Get You Ten
20. Mama Can Help, Too
21. Ask the Man Who Does the Work
22. Factory Open House Policy
23. Who Says You Can't Sell Abroad?
24. "Tell All" Promotion Rings the Bell

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CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $2.50 per insertion. Limit 50 words.
RATES for all other classifications $5.00 per insertion. Limit 50 words.
ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS WANTED

REFRIGERATION MANUFACTURERS—Do you want experienced representative for Middle-Western group of states: Iowa, Kansas, Missouri, and Nebraska? Will consider valves, insulation, compressors, controls, accessories. BOX 2574 Air Conditioning & Refrigeration News.

AVAILABLE AFTER January 1st manufacturer's representative with 12 year dealers and distributors experience in refrigerating equipment and fixtures. Would consider territory in the East or the West. BOX 2578 Air Conditioning & Refrigeration News.

AIR CONDITIONING and refrigeration engineer, 40 years old, 10 years experience, 5 years as serviceman. Thorough engineering and working knowledge of application, installation, estimating, sales and service. Now engineer in charge of air conditioning department for General Electric state distributor. Closer industry contact desired. BOX 2584 Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

WANTED—AIR conditioning and refrigeration sales engineer for Chicago and surrounding territory. Applicant must have experience and be qualified to estimate jobs. Position permanent with old Chicago concern dealing in ammonia and "Freon" equipment. Reply giving full particulars regarding yourself, also experience and salary expected. BOX 2529 Air Conditioning & Refrigeration News.

FACTORY REPRESENTATIVES wanted by leading manufacturer of complete low side and condenser lines. Company products are nationally advertised and enjoy excellent reputation. Territories now open Southeast, Central, South Central and Northeast. Our men have been informed of this ad. BOX 2561 Air Conditioning & Refrigeration News.

CHRYSLER-AIRTEMP four star dealer in Northern Ohio requires top notch refrigeration engineer for position of application engineer. Must be sales minded and experienced in all types of cooling from residential to commercial installations. Write full particulars in first letter to BOX 2568 Air Conditioning & Refrigeration News.

CHIEF ENGINEER on household refrigerating equipment. Must have very thorough experience in technical and administrative work in this line. For company in desirable city in Middle West. Reply to BOX 2570 Air Conditioning & Refrigeration News.

INSTRUCTOR WANTED to teach refrigeration servicing on a full-time basis in a private trade school in New York City. Thorough experience in refrigeration plus ability to teach theory and practice in commercial and domestic work is essential and high school education is required. Reply in detail to BOX 2581 Air Conditioning & Refrigeration News.

MANAGER—OPPORTUNITY to become set for life. Refrigeration distributor needs man to take complete charge of sales for wholesale business in Eastern Pennsylvania and New Jersey. Home office in Philadelphia. Write, giving all qualifications. BOX 2583 Air Conditioning & Refrigeration News.

REFRIGERATION SHOP instructor for the most modern equipped school in Western Pennsylvania. Salary $4000 per year. BOX 2585 Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

MOTORS AND condensing units—available at once—⅛-¼-⅓-½ Universal condensing units with or without motors. Special—six hole ice-cream cabinets with ¼ hp. Copeland units less motors $225. Also beverage coolers, beer equipment, stainless steel reach-in freezers. ALBROD CORP., 319 West 48th St., New York City 19, CI 6-9100.

SELLING OUT: used (as is) and rebuilt Frigidaire and Kelvinator condensing units with new s. ph. capacitor motors. Write for list. EDISON COOLING CORP., 310 E. 149th Street, Bronx 51, N. Y.

QUALITY BOBTAIL fountains; reach-ins, walk-in boxes—wood, metal; dough retarders; double duty cases—stainless steel, porcelain; dairy, florist, bakery cases; ice cream hardening cabinets; thermopane frozen food cases; milk, sandwich coolers; stainless steel back bars; with machines. Equipment made to special order. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16. MA 2-9093.

OUTSTANDING CLOSE-out values. All motors standard makes. Prices and complete description on request. ½ HP., AC & DC, 3, 5, 10, 15, 20 and 25 HP., 250 v, 440 v, 50-60 cycle, 3 phase, 208 v, 60 cycle, etc. 10-15% off list. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

OUTSTANDING CLOSE-out values. All new and nationally-known equipment. Complete description on request. 5 HP. water cooled compressors complete $425; 10-ton air conditioning low-side floor type $590; 20-ton air conditioning low-side floor type $850; other compressors ⅓ HP. and up. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

OUTSTANDING CLOSE-out values. All new and nationally-known equipment. Complete description on request. 16 cu. ft. Upright Freezer, remote $150; Panelectric Automatic cube-maker model 40-C stainless $148; 13.5 Upright Freezer, self-contained, complete $245. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

OUTSTANDING CLOSE-out values. All new and nationally-known equipment. Complete description on request. 12-hole ice cream cabinets self-contained, includes expansion valve and control, less machine $295; 4-hole ice cream cabinets, remote $195. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

OUTSTANDING CLOSE-out values. All new and nationally-known equipment. Complete description on request. 4-can milk coolers complete $155; 6-hole ice cream cabinets, complete, self-contained $242; 8-hole units $278; 10-hole unit $365. FRIGITEMP CORP., 931 Bergen St., Brooklyn 16, MA 2-9093.

IMMEDIATE DELIVERY at distributors discount—eight 21 cubic foot reach-in cabinets, 2 glass doors; four 30 cubic foot reach-ins, 2 glass doors; sixteen 40 cubic foot reach-ins, 3 glass doors; eight 60 cubic foot, 5 glass doors; four 80 cubic foot, 7 glass doors. Complete. LOUDON SALES, INC., 2524 - 27th Avenue South, Minneapolis, Minnesota.

MOTORS FOR sale, from stock. Jack & Heintz, others at list; discount on quantity purchases. Special prices on scheduled deliveries. Fractionals and integrals, AC and DC. Send in your specific inquiries. MODERN SUPPLY COMPANY, 206 Fulton Street, New York 7, N. Y. CO. 7-0100.

SACRIFICING BRAND-new Copeland and other top brands. Condensing units in original crates. ⅛, ¼, ⅓, ½ HP. air-cooled. 1½ and 3 HP. water-cooled. All priced for immediate clearance. Write or wire now. ROCHELLE REFRIGERATION COMPANY, 31 East 4th Street, New York 3, N. Y.

SEALED CROSLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three $5.25 (Part No. 1020) Installation tool 20¢. Immediate delivery Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SACRIFICING NEW material. 1000 Dole and Stangard cold plates, 21" x 48". 1500 wire refrigerator shelves, 21¼" x 25⅞". Wire or write U. S. THERMO CONTROL CO., 44 South 12th Street, Minneapolis 4, Minn.

EXCELLENT BUY: 25 ton vertical twin cylinder 9" x 15" Buffalo ammonia compressor complete with belting, receiver, and double pipe condenser. Also, 50 HP variable speed slip ring Westinghouse induction motor, 3 phase. Double pipe cooler. Fittings and parts included. $2100.00 complete as is FOB WATERFORD WINERY, Waterford, California.

FOR SALE at reduced prices—60 Panelectric Cuberators—automatic ice cube makers ideal for small bars and clubs where retail liquor sales not restricted. All new and excellent condition. Write for particulars. E. A. WATTENBURG, 201 Westlake North, Seattle 9, Washington.

BUSINESS OPPORTUNITIES

FOR SALE: Established refrigeration, air conditioning, heating, plumbing, appliance business. Twenty-one franchises nationally known products, some exclusive. Service shop completely equipped, manned. Stock, equipment approximately $10,000. Long low-rental lease, with option. Situated main highway, suburban community, industrial city. Reason for selling, other interests. BOX 2569 Air Conditioning & Refrigeration News.

ESTABLISHED REFRIGERATION sales and service business. City pop. 14,000 central Indiana. Merchandise at inventory. Several franchises on national advertised merchandise. Display room and service shop has long lease. $6,000 cash, balance financed. Sell with or without two new service trucks. Reason for selling other interest. BOX 2582 Air Conditioning & Refrigeration News.

Sales Representatives WANTED

We wish to correspond with several high-grade salesmen with refrigeration background to fill positions in our rapidly expanding field sales organization. Liberal compensation assured. Address Sales Department, Amana Society, Refrigeration Division, Amana, Iowa.

Completely Outfitted Model 'Superette Market' Set Up In Dealer's New Store Promotes Sales of Commercial Units

INDIANAPOLIS — Fast, efficient, and complete service—developed in building a successful commercial refrigeration setup—is a big talking point of Commercial Sales Refrigeration, Inc., here in promoting the home appliances it now carries.

The company, which calls itself "Indiana's largest commercial refrigeration dealer," branched out into the household field with the opening of its new, 12,000-sq. ft., air conditioned building earlier this year. Its "home appliance salon" features Frigidaire refrigerators, ranges, water heaters, and kitchen sinks, and RCA radios.

According to President J. J. Ferris, appliance customers have access to Commercial Sales' "exceptional" repair and maintenance department. This department, described as one of the largest and most complete in the middle west, is staffed by expert mechanics and stocked with a full supply of replacement parts.

PROMPT SERVICE PROVIDED

Thus, Ferris points out, "the buyer is assured of service in a matter of hours rather than weeks."

On the commercial side, the concern is an exclusive Tyler and Frigidaire dealer in central Indiana. Also, it is a distributor of Fischman soda fountains in the state and it was recently appointed distributor for the Osborne National line of cash registers, scales, choppers, and slicers.

Commercial Sales' new home at 2133 North Meridian St. has been equipped to provide customers with a wide variety of services. For example:

A modern "Superette Market" set complete with fixtures, shelving, islands, checkout, and other equipment necessary for the modern food market was installed in the show room a short while ago.

There is a store planning department operated by thoroughly trained salesmen. Here, a store planning table is marked off in squares one-half inch to the foot and scale models of Tyler equipment are used in setting up the customer's plan.

"If the customer is unable to come in," the company explains, "Commercial Sales birdseye-view photographs will be made and 8 by 10 glossy prints of the newly-arranged store will be taken to him by a representative. This enables the store owner to visualize the new plan and to realize just what was being accomplished."

The firm now has a department specializing in air conditioning.

A complete, modern shop is fully equipped to rebuild cases, cabinets, compressors, and coils, and to rebuild and recondition trade-in equipment for resale. The "rebuilts" are guaranteed.

Cooperation is maintained between the sales and service departments in the installation of new equipment.

J. J. Ferris, president of Commercial Sales Refrigeration, Inc., has a talk with his son, who is secretary-treasurer of the firm.

"The service department arranges all details with customers (delivery date, location of equipment, etc.) to make and complete an ideal installation," it is pointed out. "All new installations are followed up with a goodwill call by one of our specially-trained servicemen."

28 STAFF 7-YEAR OLD FIRM

These and other services are performed by a staff of 28 employes.

Commercial Sales was organized by Ferris in 1940. Its original home was a small salesroom on Ohio St.

Specializing in all types of commercial refrigeration equipment, the firm became a leader in pioneering modern refrigerated displays for stores. As the company flourished, its activities were extended to cover the entire central portion of Indiana.

Continued expansion made the concern's quarters inadequate, so Ferris designed and built the present structure. It was opened with a week-long celebration during which visitors inspected merchandise, were entertained by local artists and musicians, talked with the firm's executive and sales staff, and consulted with store-modernizing, refrigeration, and air conditioning specialists on hand for the occasion.

Announcements of the open house stressed these five points: "1—Increase your profit by modernization now. 2—Free store planning service—the newest. 3—Skilled Frigidaire experts at your service. 4—Budget your needs—let us help you plan and finance. 5—Installation—service—repair—maintenance with a 'know-how.'"

Ferris' son, J. R. Ferris, joined the organization as secretary and treasurer upon his return from military service.

Appliances on One Side--Commercial Units on the Other

A week of music and entertainment featured the opening of Commercial Sales' new 12,000-sq. ft. air conditioned building recently. Visible through the store-front window at left is the household appliance section and on the right the commercial sales department.

YOU'VE GOT OUR NUMBER!

(BOOTHS 310-312)
AT THE
Cleveland
ALL-INDUSTRY SHOW

There'll be lots to see at this year's show, but you won't want to miss the Ranco exhibit! Whether you want to see and discuss the latest developments in refrigeration controls, or just relax for a bit and discuss things in general, we'll give you a hearty welcome!

Remember our booth numbers: 310-312.

JANUARY 26-29, 1948

Ranco Inc.
COLUMBUS 1, OHIO
World's Largest Manufacturers of REFRIGERATION CONTROLS

TRACE IS "very effective" ...SAYS MR. MANNING

KELMORE REFRIGERATION SERVICE, Inc.
Commercial Refrigeration and Air Conditioning
599 SPRINGFIELD AVENUE
NEWARK 3, NEW JERSEY

Oct. 20, 1947

Highside Chemicals Co.,
195 Verona Ave.,
Newark, N. J.

Gentlemen:

We have used your product TRACE over a considerable period of time and have found it very effective in locating hard-to-trace refrigerant leaks.

We are pleased to recommend this product wherever refrigerant leaks are suspected.

Very truly yours,
A. E. Manning
A. E. MANNING
Vice-President

TRACE
REFRIGERANT LEAK DETECTOR

HIGHSIDE CHEMICALS COMPANY
195 VERONA AVE., NEWARK 4, N. J.

ALSO MAKERS OF → THAWZONE
PATENTED
The PIONEER FLUID DEHYDRANT

NATIONAL DRY BEVERAGE COOLERS

FOR BEAUTY, PERFORMANCE, ENDURANCE

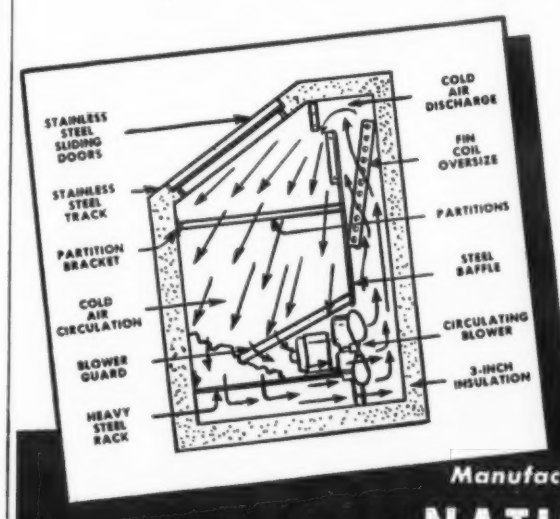
Here is America's foremost line of coolers. Beautiful stainless steel finish for remote use. Separate compressor section can be furnished if portable type is desired. Also available in black morocco finish with stainless steel top and doors.

Four sizes: 52" for 15 cases and 74" for 23 cases—each with 2 sliding doors and a General Electric blower fan; 98" for 31 cases and 118" for 39 cases—each with 4 sliding doors and 2 GE blower fans.

Bar top shown is not standard equipment, but is available for all models if cooler is wanted as a service bar.

NATIONAL Coolers are constructed of heavy gauge steel over re-inforced frames, with full 3 in. insulation. Doors are well-fitted on sturdy, easy-sliding stainless tracks. Also features full length fin coils, removable utility shelf across entire length for extra storage.

Send for illustrated circular and price list. Instant delivery—within one week.



Manufacturers of Stainless Steel and Metal Restaurant Equipment
NATIONAL COOLER CORPORATION
1600 WOODLAND AVENUE • CLEVELAND 15, OHIO

Credit Controls--

(Concluded from Page 1, Column 1)

ciation. He challenged President Truman's statement that outstanding consumer credit had risen from $6,500,000,000 in 1945 to more than $11,000,000,000 now.

Declaring that "statistics are used glibly," Cravens contended that less than half of the $11,000,000,000 "represents the kind of credit we are talking about when we speak of consumer credit."

In a statement made to the Senate Banking Committee for the Bankers Association, Cravens said the group "does not believe that consumer credit constitutes a critical area in the inflation pattern, nor does it believe that reimposition of consumer credit controls will act as a significant deterrent to the inflationary forces presently at work."

"The inflationary pressures on prices do not stem from instalment buying but from the vast purchasing power in the hands of the public, generated by the wartime fiscal practices of the Government and continued excessive spending by the Government," the state said. "These facts appear to be overlooked in the discussions about inflation.

"Consumer credit is an alternative to the dissipation of the savings of the public to the extent that it is used by people who would otherwise redeem their war bonds or use savings deposits in banks, borrow against their savings and loan shares, or life insurance policies, etc., to secure cash with which to buy goods."

'No Price Controls or Rationing' Senators Say

WASHINGTON, D. C. — Congress will definitely not now approve restored price and rationing authority but it may pass some of the less controversial parts of President Truman's anti-inflation program before Christmas, two influential Republican senators said last week.

According to Senator Taft, there is a possibility that Congress will order renewal of consumer credit controls and regulation of exports. Colorado's Senator Millikin said only the least controversial proposals may be approved and added that "it will be some other than price controls and rationing."

Craig Miller Directs Norge Sales Training

DETROIT—M. C. (Craig) Miller has been named manager of sales promotion and sales training for the Norge division of Borg-Warner Corp.

M. C. Miller

Miller has been in the appliance field 20 years, joining the Maytag Co. in 1926, upon graduation from the University of Iowa, and remaining with that company until 1943, when he was commissioned a lieutenant in the United States Navy.

Miller joins Norge following his discharge from the Navy as a lieutenant-commander. He replaces Ellis L. Redden.

HOTEL STRAND

Atlantic City's Hotel Of Distinction

A Hotel Planned and Designed for Your Every Comfort . . . assuring you absolute Rest and Relaxation . . . amid an Atmosphere of Refinement. . . .

Beautifully Furnished Rooms . . . Ocean Front Verandas . . . Roof-Top Solarium . . . Salt Water Baths . . . Cuisine Unsurpassed. Garage on Premises. . . .

OPEN ALL YEAR

Under Ownership Management

Exclusive Penna. Ave. and Boardwalk

Steel Holding Admiral To 'Break Even' Point

CHICAGO—Admiral Corp. here has recently announced a 25-cent dividend, payable Dec. 15, bringing the total dividend payment for 1947 to 37½ cents.

However, according to Ross D. Siragusa, president, "While appliances remain at unprecedented demand our appliance division is now operating at a break even level. The volume of sales and profit is below expectancy due to the universal shortage of steel. We expect the appliance division will operate at a break even level for several months."

Comparative figures from the 1947 and 1946 reports follow:

	Jan. 1,1947 to Oct. 31, 1947	Jan. 1, 1946 to Oct. 31, 1946	1947 Increase
Net Sales	$37,660,722	$26,968,146	$10,692,576
Net Profit (After all Charges)	$ 1,501,511	$ 1,084,853	$ 416,658
Number of Shares of Capital Stock Outstanding	900,000	900,000	.....
Net Profit Per Share	$1.67	$1.21	$.46

ASME Code May Hit--

(Concluded from Page 1, Column 4)

refrigeration industry have tube sheets thicker than 1¼ in., points out R. M. Armstrong of the Downingtown Iron Works, Inc., who asserts that "both of these clauses appear entirely superfluous in the light of experience with thousands of similar vessels in the past, and they will add materially to the cost of manufacture —we think unnecessarily."

Drafts of the new proposed code are obtainable from Dr. J. W. Shields of the ASME at 29 W. 39th St., New York City.

Drug Store Advertises 'Cooled' Candy Case

GREENVILLE, S. C.—To introduce the public to its new refrigerated candy department, Bruce & Doster Drug Co. here inserted a picture of the new fixture in its advertisement.

A long, low, double refrigerated case of counter height is topped by pyramided displays of boxed and bar candies, these attracted fountain customers.

Republic Steel Head Sees Little Gain--

(Concluded from Page 1, Column 2)

would have to be increased by at least $20 a ton over present prices.

"The country was combed thoroughly for scrap several times during the war," the speaker declared, "and there are apparently no large untapped reserves of remote scrap. Scrap will therefore remain tight until the steel industry drops back from its present capacity rate of operation."

In the face of this situation, Republic's president pointed out, the steel industry has maintained record peacetime production since the end of the war.

Despite the difficulties it faces the industry is currently spending more than a billion dollars for improvement and expansion, White said, but it will be at least two years before much of this expansion can be producing for a steel-hungry world. Republic alone, he added, has made commitments for more than $108,000,000 since the war ended.

"Though we do not expect the level of general business activity to drop more than 5% next year," White said, "and almost none of this drop will be in the hard goods line, our studies of long range trends of the major steel-using industries show they are consuming steel at a highly abnormal rate."

Referring to the 1948 demand, White said, "our most recent survey by major industries shows effective steel demand for the 12 months beginning Sept. 1, 1947, to be about 66.5 million tons of finished steel.

"Next year's production cannot greatly exceed this year's 62 million tons, with the scrap and coal situations as they are and the interruptions we will have this winter due to gas shortages if the weather is severe. So we will still face a shortage of about three to four million tons, if our thinking is correct. Nobody is going to come up with a magic formula to solve the steel shortage this year or next because there isn't any magic formula."

White branded as "absolutely fantastic" assertions that two million tons of sheet steel have gone into gray market channels.

An open letter about "FREON" cylinders

FORM OR-5010

KINETIC CHEMICALS, INC.

WILMINGTON 98, DELAWARE

CABLE ADDRESS: KINETICHEM

To All Users of "Freon" Safe Refrigerants

Gentlemen:

Recently there has been a sharp drop in the returns of empty "Freon-12" cylinders to our plant.

This indicates that some users of "Freon-12" dichlorodifluoromethane are becoming careless about returning their cylinders as soon as they become empty... also that some users are collecting and storing full cylinders for later use.

A shortage of empty cylinders at our plant means that we cannot continue to ship "Freon" at our present high rate. From a long range viewpoint, it means that the total amount of "Freon" available to the industry in the next months will be considerably less than it would be if all cylinders were in circulation.

New cylinders are still in short supply. They cannot solve the problem.

The only way it can be solved is by keeping "Freon" cylinders in circulation. Your cooperation is urged.

Sincerely,

W. W. Rhodes

W. W. Rhodes,
Sales Director

P.S. Remember, we now pay cylinder deposit refunds directly to the persons who return the cylinders.

KINETIC

FREON

REG. U. S. PAT. OFF.

safe refrigerants

"FREON" IS KINETIC'S REGISTERED TRADE MARK FOR ITS FLUORINATED HYDROCARBON REFRIGERANTS AND PROPELLENTS